

American
Fruit Grower

SEPTEMBER 1952



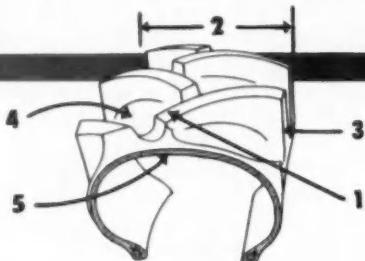
HARVESTING HINTS AND SHORTCUTS

You Get More for Your Money With
Firestone Tractor Tires Because

THERE IS MORE BUILT INTO THEM!

Only **Firestone**
CHAMPION
OPEN CENTER TRACTOR TIRES

Give all these Extras:



- ① CURVED AND TAPERED BARS . . .**
For a sharper bite and deeper penetration . . . greater draw bar pull.
- ② WIDE, FLAT TREADS . . .**
For more biting edge, full-width traction and longer life.
- ③ BIGGER, STRONGER SHOULDERS . . .**
For greater tread contact, for a bigger bite and longer and more even tread wear.
- ④ FLARED TREAD OPENINGS . . .**
To prevent soil jamming and to permit easy soil release.
- ⑤ DUAL SHOCK PROTECTORS . . .**
Extra tread plies to absorb severe impacts.
- ⑥ FIRESTONE LIFETIME GUARANTEE . . .**



Firestone
CHAMPION
HEAVY DUTY
TRUCK TIRE

A new, rugged, low-priced tire that is built for all-around farm truck service.



THERE ARE MORE FARM TRACTORS ON FIRESTONE TIRES THAN ANY OTHER MAKE

Enjoy the Voice of Firestone on radio or television every Monday evening over NBC

Copyright, 1952, The Firestone Tire & Rubber Co.

Entered as second-class matter at Post Office at Willoughby, Ohio under the Act of March 3, 1879. Additional entry at Mount Morris, Illinois.

SEPTEMBER 1952
VOL. 72 No. 9

CONTENTS

Cover photograph of Rome Beauty apples by Gifford.	
Letters to the Editor	4
IAA Convention a Huge Success	6
Let's Give the Consumer a Tree-Ripened Peach	9
By D. C. Alderman	
Plan Your Harvest for Increased Profits	10
By E. J. Rasmussen and Harold W. Adams	
Health—Then Wealth—from Apple Cider	12
By Jack Whitnell	
California Bids for Grape Juice Market	13
By W. V. Cruess	
Peach Grove	14
By Eldon S. Banta	
State News	15
Fruit Pest Handbook	15
Build for Tomorrow When You Build Today	16
Washington Fruit Letter	16
By Larston D. Farrar	
Soil Applications of BHC Result in "Off Flavor" in Canned Peaches	17
The Question Box	17
Success? It's Spelled "A-P-P-L-E"	20
By Sidney Snook	
A Word for the Dug Well	23
Calender of Coming Events	25
The Orchard Home	29
Editorial Page	30

AMERICAN FRUIT GROWER

Published Monthly by
AMERICAN FRUIT GROWER PUBLISHING CO.
Willoughby, Ohio
E. G. MEISTER
Publisher
Editorial Staff
R. T. MEISTER H. B. TUKEY
E. K. GOULD ELDON S. BANTA
M. A. FRAZIER
Washington Correspondent LARSTON D. FARRAR
Advertising Manager
EDWARD L. MEISTER

BRANCH OFFICES AND REPRESENTATIVES
CHICAGO, Peck and Billingslee, Inc., 185 No. Wabash. Phone—Dearborn 2-0292
SAN FRANCISCO, McDonald-Thompson, 625 Market St. Phone—Yukon 6-0647
LOS ANGELES, McDonald-Thompson, 3727 West 6th St. Phone—Dunkirk 7-5391
SEATTLE, McDonald-Thompson, Terminal Sales Bldg. Phone—Main 2860
DALLAS, McDonald-Thompson, 1118 Odense Dr. Phone—Winfield 4911
PORTLAND, McDonald-Thompson, 115 S.W. 4th Ave. Phone—Atwater 7401
DENVER, McDonald-Thompson, 222 Colorado National Bank Bldg. Phone—Keystone 4669

SUBSCRIPTION RATES
Domestic, 3 years \$2.00, 1 year \$1.00. Single copy 10c. Canada and foreign \$1.50 per year.

CHANGE OF ADDRESS
Please notify us if you change your address, giving us the old address as well as your new one.

[PRINTED IN USA]

SEPTEMBER, 1952

3 KEYS TO HIGHER PROFITS



"HYDRO-COOLING"

(Rapid removal of field heat by means of an ice-chilled water bath)



"FIELD-ICING"

(Packing for market with crushed ice in bags, baskets or crates)



"ICE-PROTECTED SHIPMENT"

(Bunker-iced or body-iced)

Better condition brings increased sales at premium prices. Growers, shippers and receivers alike are making more money with fruits and vegetables handled in the modern ICE way.

For full information on "Hydro-cooling" and "Field-Icing"
WRITE

NATIONAL ASSOCIATION OF ICE INDUSTRIES

1706 L STREET, N. W., WASHINGTON 6, D. C.

A PRUNER FOR YOUR POCKET



A little pruner
that handles big jobs
because it's Atkins

Silver Steel.

Ask for the Atkins No. 18—a pruner that folds up and fits in your pocket, yet big enough for dozens of professional pruning jobs. Special Silver Steel design, polished peg tooth edge, lacquered beech handle, 12" blade.

• Just name your job and you'll find your pruner in the Atkins *Silver Steel* line. Ask for the model specially designed for your kind of trees—then get the No. 18 folding saw, shown above, to carry with you all the time.

You'll find *Silver Steel* answers three big problems—the tests of speed and weather and time. *Silver Steel* designs are truly professional. *Silver Steel* handles are comfortable and less tiring. And specially-alloyed Atkins blades hold sharper edges for a longer time.

Ask for Atkins tomorrow—you'll save in the long run with *Silver Steel*.



ATKINS

E. C. ATKINS AND COMPANY • INDIANAPOLIS 8, INDIANA

LETTERS TO THE EDITOR

Next—The Nuts!

Dear Editor:

An article in one of your recent issues entitled "Next Please—The Nuts!" states that nuts have a considerable amount of vitamin A. Checking with the USDA Handbook, peanuts, coconuts, cashews, Brazil, and almonds have no vitamin A. English walnuts have 30 units and pecans 50 units per three and one-half ounces. Since we require 5,000 vitamin A units per day, this small amount could hardly be called considerable. Camden, N.J. Edwin L. Lehman

Henry Bailey Stevens, author of the article in question, makes the following reply: "It is true that I was putting our 'best foot forward' in using the word *considerable*, though my Pocket Guide for Calorie Counters and Vitamin Hunters by Marion Brown, indicates that five hazel nuts contain 30 international units of vitamin A, six pecans 28 units, six walnuts 12 units, 15 pistachios 14 units, and one-half cup of peanuts 100 units. Also, Gaylord Hauser in his book *Diet Does It* says, 'Nuts are usually not eaten in sufficient amounts to be good sources of vitamin A, although they average about 400 units per cup.' —Ed."

The Rootstock Problem

Dear Editor:

These remarks have to do with the statement in the recent story about top working several apple varieties on Virginia Crab and Hibernal. Specifically, the statement read, "Greater success has been experienced with Virginia Crab than Hibernal."

Back in 1916, Joe Oskamp of the Purdue Horticultural Department began a study of apple rootstocks and this early work was confined primarily to known rootstocks, such as own-rooted Virginia Crab, own-rooted Wealthy, etc. A number of our commercial apple varieties were stem grafted on these stocks about a foot above the ground. One row of Grimes, stem grafted on own-rooted Virginia Crab, developed into exceptionally fine productive trees which are now 30 years old.

Unfortunately, Virginia Crab eventually proved to be incompatible with many of our standard commercial apple varieties. It was found that even Grimes, when top worked on intermediate Virginia Crab (that is, Virginia Crab on French seedling roots) made a very unsatisfactory tree. The same was true for Stayman, Turley, Rome, Winesap, Golden Delicious, and some strains of Delicious. The Virginia Crab bodies twisted and bent over to the northeast in many cases. There was a decided dwarfing effect on the top growth of Rome, Turley, Stayman, and Golden Delicious. The scaffold branches often broke away from the sockets on the bodies of the trees with heavy loads of fruit.

Commercial growers, such as J. W. Welday, Smithfield, Ohio, who had made large plantings of Rome and Golden Delicious top worked on intermediate Virginia Crab, were very much disappointed with the results. In some cases entire blocks of varieties, such as Rome, had to be pushed out and replanted.

A young 40-acre planting of apples at the W. C. Reed Orchard at Vincennes, Ind., on intermediate Virginia Crab, has nothing like the tree uniformity found in

some 150 acres of the original orchard where all varieties were root grafted on French Crab.

As the years go by it becomes more and more evident that a particular rootstock or intermediate stock may be satisfactory for only one or at the most two of our present commercial apple varieties. Even slight incompatibility between the stock and the variety may cause injury either to the stock or the top. For instance, the November low temperatures of 1951 resulted in severe bark splitting of intermediate Virginia Crab bodies top worked on Rome Beauty. Practically an entire experimental planting of 10-year-old Golden Delicious on Malling I was killed by the same November freeze.

I feel that the problem of superior rootstocks and intermediate stocks for our present commercial varieties of apples has not been completely solved. When one considers the thousands of acres of quite uniform apple plantings which were root grafted on French seedlings, the big question comes up as to whether we have gone forward or backward. Growers are being offered trees with trunk sections of some dwarfing intermediate stock and there are as yet no producing plantings of such combinations that definitely prove their commercial value.

Based on over a third of a century of observations, I am convinced that our Indiana growers have definitely failed to increase their apple income by the use of the various and sundry under stocks and intermediate stocks that have attracted attention during this period.

Vernon Patterson, extension horticulturist in Ohio, in the same issue of *AMERICAN FRUIT GROWER*, states that "It has been found that apple varieties budded on Malling stocks II, IV, and VII gave the most promising results for commercial plantings." He suggests, however, that growers try "small test plantings."

This letter is not to be construed as a criticism but to raise the question as to whether the study of both rootstocks and intermediate stocks has reached such a stable point that indiscriminate recommendations can be made to commercial growers on the basis of large-acre plantings. Lafayette, Ind. C. L. Burkholder

Marketing Problems In Canada

Dear Editor:

I enjoy your magazine and have learned many useful things from it.

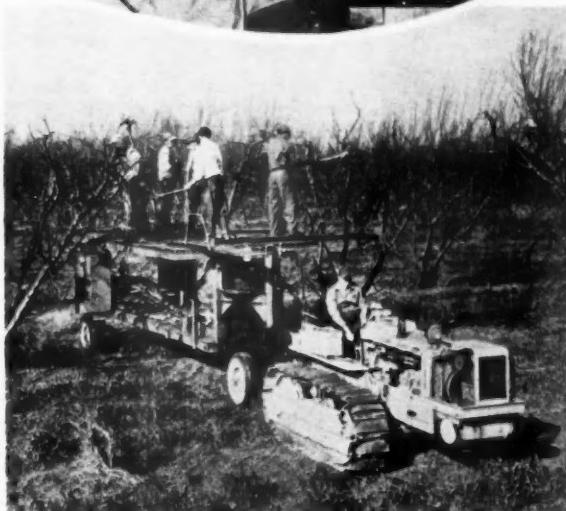
Here in Ontario we have the same cull problems as discussed by W. E. T. and A. H. Apperson in one of your recent "Letters to the Editor" columns, and personally I hope to see a growers' association get a marketing scheme to enforce the disposal of culls, especially in surplus seasons.

W. E. T. states he was offered less for No. 1 fruit in Chicago than for second grade fruit at home. If he gave his local market the best he would soon increase the demand. Providing no seconds were available elsewhere the price for No. 1 fruit would soon advance. Good apples are preferred by most children to other fruit, yet apples are usually cheaper.

If growers would all act together, they could name their own price, within reason. Wellandport, Canada Lawrence Pogue

"With our 'Cat' Diesel Tractors we

PRUNE FOR 40¢ A TREE SPRAY 50 ACRES PER DAY"



► David Orth, Denair, California, says this about his "Caterpillar" Diesel Tractors: "I'm of the opinion that if you take care of them, you can't wear 'em out! Our work is plenty tough . . . but the 'Cat' D4 Tractors take it in stride. We spray on schedule pulling this 500 gallon speed sprayer even when weather and soil conditions aren't ideal for traction. We've always had good service from our 'Caterpillar' Dealer . . . and we've found that 'Caterpillar' Diesel Tractor resale value is much higher than others."

Pruning costs often become top heavy in big orchards . . . and here's one way this Orth Ranch D4 helps cut pruning and trimming expenses. Mounted on the "Cat" D4 Tractor was a $3\frac{1}{2}'' \times 3''$ compressor, driven from the front power takeoff. This furnished power for 6 pruning guns. Owner Orth hitched to the drawbar a low-lift loader which raises and lowers by hydraulic cylinders. Power is furnished by the D4 takeoff driven hydraulic pump. The D4 Tractor pulls the load through the orchard, stopping while the men on the platform prune and the operator trims off lower dead branches. Here's how Mr. Orth figures costs: "We pruned 10,000 trees in 57 working days, 9 hours each, with seven men including operator. That's $17\frac{1}{2}$ trees per day. It cost us:

Labor	\$3,661.85
Fuel Oil	55.22
4 Oil Changes	17.50
4 Oil Filters	5.00
Depreciation (\$3.00 per day)	171.00
TOTAL	\$3,910.57

That figures out to 40¢ per tree...10¢ less than our former method. And it's much quicker."

This is typical of "Caterpillar" Diesel Tractor usefulness. You have strength for a long life that no other tractor can match. You have fuel savings amounting to 60% to 80% in comparison to spark-ignition tractors. You have traction and power for heavy loads . . . for light soil . . . for bulldozing and land improvement. Your Dealer will make early delivery on "Caterpillar" D2 and D4 Tractors . . . so see him soon! Arrange for a free demonstration in *your* orchard . . . with *you* at the controls!

CATERPILLAR TRACTOR CO., Peoria, Ill.

CATERPILLAR

REG. U. S. PAT. OFF.

Diesel Orchard Tractors

DIESEL ENGINES • TRACTORS • MOTOR GRADERS

EARTHMOVING EQUIPMENT

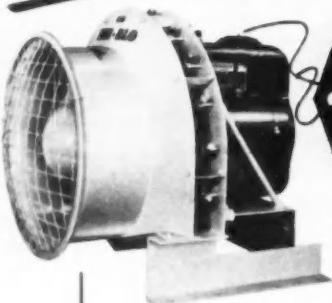
ONE MAN
Does It All

FASTER • BETTER

CONVERT YOUR
PRESENT RIG...

WITH A

BIG BES•BLO



FOR ONLY

\$741⁴²

F.O.B. Peoria, Ill.

15,000 c.f.m. . . . Easily
mounted at rear of high
pressure sprayer . . . Also
available in 25,000 c.f.m.
and 7,500 c.f.m. models
. . . one is right for you.

- **AIR BLAST** agitates foliage, covers fully from top to bottom, inside and out, even on largest trees.
- **PRECISE CONTROL** of pattern for all conditions. Instant on-off valve operates from tractor seat.
- **DILUTE OR CONCENTRATE** sprays handled equally well.
- **SOLD COMPLETE**, ready to mount, with

STURDY ENGINE, Wisconsin air-cooled type

AXIAL FAN, replaceable blades, strong safety guard

ADJUSTABLE DEFLECTORS for 1 or 2-way spraying

MANIFOLDS AND NOZZLES, uniformly fine atomization



WRITE for
FREE literature

PROMPT DELIVERY out of warehouses at Kansas City, Peoria and Philadelphia. Distributors throughout U.S.

BESLER CORPORATION • 4053 Marin Street, Emeryville, Oakland 8, California

Send me free literature on:

- The complete BES•BLO line of blower attachments The BES•SPRAY blower-equipped sprayer
 The BES•KIL livestock and utility sprayer

NAME _____

ADDRESS _____

CITY _____

STATE _____

IAA Convention a Huge Success

EVEN the weatherman did his part to make the 58th annual convention of the International Apple Association on August 4-6 the top convention of the fruit and vegetable industry in many a year. The St. Louis, Mo., hosts, men and ladies, can pat themselves on the back for an exceptionally fine job.

Joseph Hall, president of The Kroger Company, one of the featured speakers, minced no words in citing some of the merchandising shortcomings of the apple industry. In his talk entitled, "They Vote Every Day," he stressed the importance of the individual customer. Just as "you cannot deny the will of the voter in politics, you cannot deny the will of the customer in merchandising. . . . And the food customer votes every day."

Further stress on the need for sound merchandising methods was made by Mabel Flanley, executive director of Processed Apples Institute, Inc. The following five essentials Miss Flanley believes are necessary to a successful approach to the problem of cultivating customers for apples: 1) Know your competition. 2) Know your product and its strong selling points. 3) Know your customer and what motivates her buying habits. 4) Talk to the customer, not to yourselves. 5) Sell, sell, sell—day in and day out—in a consistent year-round program.

Apple Crop Estimate

Total U. S. apple crop for 1952 was estimated by Fred Burrows of the IAA staff at 99,936,000 bushels, and Canada 12,780,000 bushels, or a total crop of 112,716,000 bushels. This is 13 per cent below last year.

Movement of the 1952 crop prior to December 1 was estimated as follows: Processed, 29½ million bushels; exports, 500,000 bushels; and 4½ million not expected to be marketed; commercial fresh domestic use, 30 million bushels.

Estimated movement after December 1: In storage, 35,436,000 bushels; processed from storage, 1½ million bushels; exports, one million bushels.

Because of the unfavorable export situation a resolution was passed in which the association urged the Congress to enact legislation designed to re-establish exports on a normal pre-war basis.

M. E. Knouse of Peach Glen, Pa., was re-elected president and S. M. Cohodas of Ishpeming, Mich., was elected treasurer.—N. Eschmeyer.

AMERICAN FRUIT GROWER

"A BUSY PLACE LIKE OURS SOON LEARNS TO DEPEND ON CHAMPIONS!"



—says Clarence Hoff (right) who, with his brothers Frank (center) and George, operates the 900 acre Hoff Bros. farm and farm dairy near Saginaw, Michigan.

The Hoff Bros. farm is indeed a busy place. Farming nearly 900 acres, as well as operating a retail dairy, keeps these three brothers on the jump almost every minute. Their registered Guernsey and Holstein herd benefits from many advanced farming and dairy methods. For example, this was one of the first farms to adopt the stalk crushing method of haymaking. Not only does this result in higher nutritional value for the alfalfa and good color to the milk, but it cuts the drying time of the hay and allows it to be stored much sooner.

This was also one of the first farms in the area to install a conveyor type dairy barn cleaner. Specialized machines help maintain a high yield of peas, beans, corn, wheat, oats and barley as well as Michigan's famous sugar beets.

As Mr. Clarence Hoff says, "The more activities you have on a farm, the more you turn to mechanized equipment. Besides our fleet of home delivery units, tractors, general purpose trucks and cars, we use gasoline engines on harvesters and other farm machines. Take our blower, for instance. When we're filling one of the silos, that blower has to maintain a constant speed. A drop of 100 RPMs means a clogged pipe. Let me say that Champions are the only spark plug we can depend on to keep that blower wound up. In fact, whether it's for hour after hour operation of our tractors, or 'stop and go' city driving of our milk trucks, we've learned to bank 100% on Champion Spark Plugs for real, dependable performance."



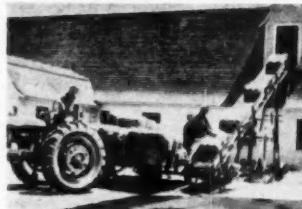
Scientifically cultivated fields and well kept farm buildings and residences make the Hoff farms an impressive sight from the air.



One of the young Hoff boys—already an experienced farmer—operates a tractor and haymaker.



This large expanse of sugar beet acreage provides one of the major crops on the Hoff farms.



A portable conveyor makes quick work of transporting hay bales from trailer to loft.



One of the units of the Champion-equipped fleet of Hoff's Farm Dairy home delivery trucks.



This modern building houses Hoff Bros.' immaculate and up-to-the-minute milk processing and bottling equipment.

ARE WELL WORTH
ASKING
FOR—
BY NAME!



CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO

SEPTEMBER, 1952

votes
votes
votes
votes
for Pliofilm

—thanks to moisture control

Here are just a few of the dried fruit brands now using PLIOFILM for the utmost in packaging protection and sales appeal.

PLIOFILM controls moisture content, prevents drying out, keeps product at its best far longer. It heat-seals readily, prints clearly in multicolors.

If you have a moisture problem in packaging, investigate this transparent, moistureproof film. Write: Goodyear Packaging Engineer, Pliofilm Dept., Akron 16, Ohio.

Pliofilm, a rubber hydrochloride - T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Good things are better in

Pliofilm

3-way protection against air, moisture, liquids





The housewife buys tree-ripened peaches in small units; likes them in cartons holding eight peaches in individual cells.

LET'S GIVE THE CONSUMER A TREE-RIPENED PEACH

**Tests show mature fruits outsell
hard-ripe four to five times when
properly packaged to prevent bruising**

By D. C. ALDERMAN

PEACHES can be harvested in a condition bordering upon FULL RIPE and packed and moved to distant markets successfully. What is even more important, such peaches will move rapidly in retail stores! But in order to bring about this desirable situation certain changes must be made in handling techniques from orchard to retail store.

It was my privilege to have been actively associated with the successful development of a tree-ripened peach program in Louisiana which started in 1946. Since then we have learned a great deal about what can and cannot be done with a ripe peach and have evolved a rather simple procedure which must be followed when dealing with fully ripened fruit.

The key to the successful operation of such a program lies in harvesting the fruit at the proper stage of maturity. Each variety has its own characteristic ripening pattern which becomes manifest as the fruit approaches the end of its final swell.

Redhavens, for example, remain

hard and small with dark red coloration and a ground color of greenish yellow up to almost the very last minute. Then in the matter of a day or two the fruit begins to swell rapidly and the ground color changes to a light orange or peach which in turn softens the harshness of the overall red. The resulting product when harvested at this stage is a thing of beauty, yet the flesh is still firm and can be handled satisfactorily.

Elbertas approach the final stage of maturity more gradually and it is often a temptation because of their size to harvest them too soon. This variety should be picked when the last of the green ground color has turned a yellowish orange and the fruit has taken on a soft peach-colored hue. Growers will find that harvesting Elbertas at this stage of maturity will increase their total yield 10 to 15 per cent.

Picking directly into a half bushel basket or half Spartan box with paper liners has proved to be a very satisfactory practice among Louisiana growers. Some growers also successfully use a heavy paperboard box of similar size and shape. As rapidly

as they are filled, the field baskets are collected and hauled to the packing shed on a flat-bed truck or trailer. One cardinal rule that must be observed in harvesting: *Handle the fruit as few times as possible.*

Most grading and packing machinery was not made to handle tree-ripened peaches so it is necessary to liberally pad the hard corners and drops with foam rubber or similar material. The fruit must be carefully poured—not dumped—onto the conveyor and a steady flow maintained of a single layer of peaches. If commonsense precautions are taken practically all bruising due to grading and packing can be eliminated.

Now comes the *piece de resistance* —the type of container best suited to carry tree-ripened peaches to market several hundred miles distant. Louisiana growers are using a paperboard container with four layers of peaches placed in individual cells. The cost of packing in this type box as compared with the conventional bushel basket is approximately 24 cents more per bushel. Cost of container is included in this computation.

(Continued on page 22)

Previous to joining the staff of the University of West Virginia, the author, D. C. ALDERMAN, was manager of the Louisiana Fruit Growers Association.



Plan Your HARVEST FOR INCREASED PROFITS

Here are valuable hints, shortcuts, and laborsaving equipment to make your fruit handling more efficient

By E. J. RASMUSSEN and HAROLD W. ADAMS

of the picker's time. Inexperienced labor can be used to carry boxes, at less expense.

An experienced picker, for example, under good picking conditions, will fill a box in five to six minutes. If this picker is required to walk 120 feet—the distance from one side of a tree to the center of the row when trees are set 27 to the acre—and back again every time he picks a half bushel, one-fifth of his picking time is wasted. In other words, four pickers who are not required to carry the filled boxes can do the work of five who are.

Inexperienced pickers should be impressed with the importance of handling the fruit so that it will remain free of bruises and stem punctures. They should be cautioned that spurs should not be cut but that stems should be removed with the apples. To keep the stem intact, apples are bent upward when removed from the spur.

The usual organization of crews places a foreman in charge of from 10 to 12 pickers. Where crews are made up of experienced pickers a foreman may not be needed; but untrained pickers always need close supervision. It will help you hold harvest labor throughout the season if you produce good crops on well-pruned trees, and then pay the "going" wage. Sometimes growers in

a certain area will agree on a specific rate of pay for the season. Another method is to pay a bonus—sometimes as high as a cent or more a box—to pickers who stay through the entire harvest.

The kind of picking container used influences both the efficiency of the picker and the amount of bruising of the fruit. Recent experiments at the University of New Hampshire showed that good pickers using the old basket-type container and then transferring the apples to boxes could handle only 5.1 bushels per hour. The total was increased to 9.2 bushels per hour when the canvas-bottom bucket was used. Examination of this fruit two months after harvest showed an average of 14 less bruises per box for the fruit picked in the canvas-bottom buckets.

A New Hampshire grower has a good picking idea. He has his workers harvest the fruit directly into a half-bushel peach basket suspended from a hook on a special belt worn by the picker. The fruit is hauled to the packing house in a truck equipped with a specially-made body for holding the baskets. The baskets of fruit are then dumped directly into the grader. This efficient money-saving method also results in less bruising.

Being an important piece of equipment during the harvest operation ladders should be selected with care.

GOOD organization of the harvest operation is extremely important if time, money, and labor are to be kept to a minimum. First of all an estimate of the crop is necessary in order to determine the number of containers and the amount of labor and equipment that will be required.

The time to start harvesting will depend on three factors—size of the crop, fruit maturity, and probable length of the harvest period as calculated by variety and available labor.

Some methods of determining fruit maturity are interval between bloom and harvest, ease of separation of fruit from stem, firmness of the fruit, color of fruit, and color of seeds.

Length of time between bloom and maturity is usually a good indication of the date when apples are ready to be picked. In New Hampshire, about 127 days are required for McIntosh to reach maturity, 135 for Baldwin, 128 for Cortland, 132 for Delicious, and 145 for Stayman.

Another way to check maturity, and a method which could well be used more extensively, is to measure the firmness of the flesh of the fruit with a pressure tester. A pressure test of 14 to 15 pounds on McIntosh, with the skin removed, is about right for this variety. Baldwin should test about 18 to 20 pounds at maturity, and Cortland about 13 to 15 pounds.

No matter how the picking is done, the work should be so planned that each picker will handle as much fruit as possible. Making good pickers put fruit from four trees in one central spot for handier loading is a waste

Both authors are on the staff of the University of New Hampshire. E. J. RASMUSSEN as extension horticulturist and HAROLD W. ADAMS as agricultural extension editor. All photographs are by Mr. Rasmussen with exception of ladder photo, which is by Sidney Snook, Elizabethtown, NH.



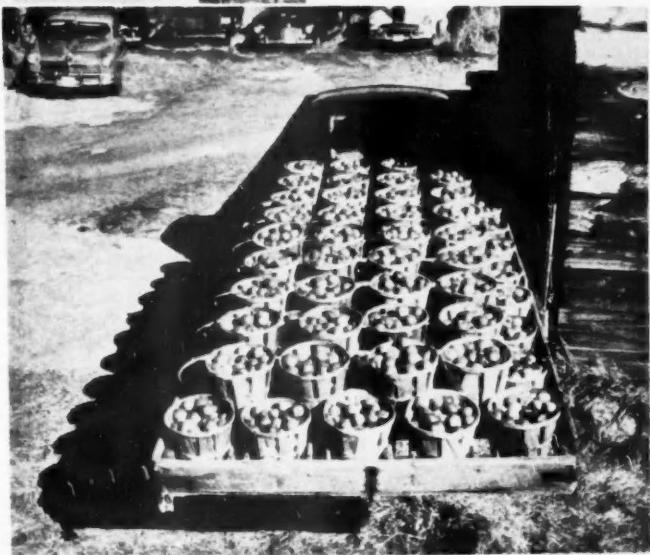
An eight to 10-foot ladder can be used to advantage on level sites to pick the outside areas of the tree. This avoids the common practice of knocking off fruit when tall ladders are placed against unpicked branches.

A low stool, about two and one-half to three feet high, with a top large enough to hold an apple box is both a time and a labor saver. Used for picking directly into boxes from low branches it saves time usually taken for dumping and reduces handling of the fruit.

Many growers move their tree-run fruit directly into the packing house where it is packed before being placed in storage. While this method requires a grading and packing crew during the harvest season, it does enable the grower to market part of his fruit early and also make the best use of available storage space. Where and when help is plentiful, this method usually is a good one for at least a portion of the crop.

Recent research in New Hampshire shows how extremely important it is to handle fruit carefully. Boxes of McIntosh when dropped from a height of eight inches received 11 punctures and 147 bruises per box. When dropped a second time, an

Photographs on facing page and at top left on this page show, left to right: A low stool for picking fruit from low branches directly into boxes. A double-decked trailer with hinged upper deck for easy loading and unloading. Half bushel peach basket used for picking, suspended from belt worn by picker. Correct way to wear canvas-bottom picking bucket. Correct method for transferring apples from bucket to crate.



A specially built rack on truck securely holds filled baskets.

SEPTEMBER, 1952

average of 42 punctures and 276 bruises per box were counted.

During the same project, boxes of apples were trucked from Durham, N. H., to Boston, Mass., and back. The apples in the front of the truck showed an average of 22 punctures and 63 bruises per box, while those on the back of the truck showed only 18 punctures, but 426 bruises.

When hauling apples, trucks should be well loaded to avoid this unnecessary bruising. The use of airplane tires on springless trailers will help.

Some growers hitch portable power elevators or conveyors to the back of a truck for loading apples in the orchard, thus saving at least one man's time in the loading operation.

The work of leveling boxes in the orchard in order to stack them on a trailer is quite a chore. A New Boston, N. H., grower has come up with an answer. He has built two trailers each of which will carry 65 to 70 boxes, and since they are double-decked no leveling-off is necessary.



A wooden ladder attached to three-point hydraulic lift on his tractor enables Kentucky grower Lester Harris to speed up harvesting of fruit in tops of trees 50%.

While one trailer is being unloaded at the packing house, the other is being loaded in the orchard.

Here are a couple of ideas you may want to adopt in your packing house. One grower we know removes the largest McIntosh on the grading belt before the fruit goes through the grader. In this way his prime fruit receives the best possible care.

Another grower has placed a mirror on his grader in such a way that the man dumping the fruit can see when his box is empty. THE END



Apple cider "choos"—frozen cider on a stick—appeals to the younger generation, is being sold by Kinze throughout the West Coast area.

HEALTH—THEN WEALTH— *From Apple Cider*

By JACK WHITNALL

CIDER as an arthritis cure? Impossible! No, not impossible, according to E. J. Kinze of Yakima, Wash.—entirely possible.

In 1947, Ed Kinze was an arthritic cripple. In the morning when he crawled out of bed he did just that—he crawled. Arthritis in his back had become so bad over a period of years that he literally had to crawl on all fours the first half hour of his day; it was the only way he could travel.

And as far as he could determine, after hundreds of dollars spent with various doctors on various treatments,

there was no hope of a cure. As a last resort, Ed decided to try apple cider. He had read about the therapeutic value of apple cider and felt that he had nothing to lose by trying it.

Peculiarly enough, for one of the

major apple producing centers of the world, Yakima produces little cider. Apple juice, of course, but not cider. "What cider I could find at that time was usually of poor quality," Ed relates.

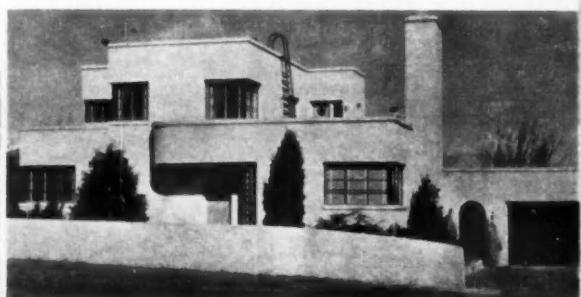
"I decided to produce my own. I found out immediately that good cider mills were as hard to come by as good cider. I finally found a mill manufactured in the East, the Palmer cider mill, which slices the apples instead of grinding them, and I ordered it, much against my wife's wishes. The mill cost \$675. I installed the mill in the pumphouse, and within a few days after operation started, I was consuming up to two gallons of cider a day."

Ed Kinze wins battle with arthritis and pioneers a new field in his area

Within 90 days Ed noticed a lessening of his pain, and within a year his arthritis was gone. He still consumes cider, but not as much as at first. He merely drinks cider now instead of water, perhaps a quart a



Roadside warehouse where Kinze retails his cider, apple cider "Choos", fresh and canned fruits.



The Kinze's modern new house is close to their cider mill and retail warehouse.

day. In summer he drinks more of it. He does a full day's work, and is bothered only occasionally by slight twinges of arthritic pain.

Ed is a fruit grower by profession. He has 105 acres, with a total of 48 acres of apples, 10 of apricots, 10 of peaches, 13 of pears, and three of cherries. But last year his cider business and its offshoots grossed better than \$6,000, and Ed is beginning to feel ambitious. He is now planning a half million dollar expansion program.

(Continued on page 18)



New building which will house two new cider presses and freezing unit. Old cider house to left.

All photographs
by the Author

CALIFORNIA BIDS FOR GRAPE JUICE MARKET

Concords will add zest to over a million gallons of blended California varieties

By W. V. CRUESS, University of California

MANY persons have assumed that since California produces more than 90 per cent of the grapes grown in the United States, this state must also produce much or most of the unfermented grape juice. But the fact is that New York with Washington state and one or two others produces most of the nation's grape juice.

Before prohibition the California Wine Association produced a well advertised grape juice known as Calwa. Calwa was a 100 per cent *vinifera* (European) grape juice with no Concord or other *labrusca* variety in it.

The Swett Company, however, at that time bottled a blended juice of "foxy" (Concord) flavor. The major part of the blend was red juice of the Pierce Isabella "slip skin" variety and the remainder of the blend was juice of *vinifera* red wine varieties.

The Masseli Company of Fresno bottled a white juice made from the highly flavored Muscat variety, a well known raisin grape.

During the prohibition era practically no grape juice was made in California, probably because the former producers had been wine makers and were out of business. Also, it was difficult to overcome the rather general belief that *vinifera* grapes (European, or "California") varieties do not possess sufficient flavor and acidity (tartness) to please the average American consumer. But this situation has now changed, thanks to the efforts and perseverance of Cella Vineyards of Reedley, Calif.

Several years ago J. B. Cella, B. B. Turner, and A. Ohanesian of Cella Vineyards became interested in the possibility of bottling a grape juice containing sufficient Concord juice to impart its flavor but consisting chiefly of California *vinifera* red juice. Many experiments were made to establish the ratio of Concord to *vinifera* required to give a satisfactory juice. Also the sugar and acid content of the juice was varied experimentally to determine the preferred degrees of sweetness and tartness.

As in experiments made at the University of California in 1912-20 they

found that the grapes should be picked slightly immature or at considerably lower sugar content for juice than for wine, namely at about 19° to 20° Balling instead of the usual range of 22° to 24° for table wines or 23° to 28° for fortified dessert wines. If the juice is too sweet and too low in



Juice of Concords grown in Washington is used in the California blend. Photo at top, right, shows huge steel tanks at Cella Vineyards in which chilled juice is stored.

acid it satisfies too quickly and one can drink very little of it at a time and not very often.

I recently visited the Cella winery and grape juice plant and discussed juice production with Aram Ohanesian. He stated that when first produced their juice was a blend of about 35 per cent Concord juice with about



65 per cent red *vinifera* juice; but that it has been found that considerably less than 35 per cent of the Concord is required and that such a blend is proving very popular.

The Concord juice for the Cella company's Betsy Ross blend is obtained from a growers' co-operative
(Continued on page 19)

PEACH GROVE

Family farms follow horticultural lines in producing fruits, berries, and vegetables in a prominent midwestern fruit area

By ELDON S. BANTA

LONG about 1875 Harold Cress's grandfather, a good peach grower, drove his wagon into town for repairs. While in the shop someone painted the name Peach Grove on the side of the wagon. As Grandpa Cress drove home, neighbors noticed the name and they never forgot it.

That is how the ridge area on the northwest outskirts of Cincinnati got its name, Peach Grove. It is known as one of southern Ohio's prominent fruit and vegetable growing sections, although it produces only for the Cincinnati market. Harold Cress is one of the section's prominent growers.

The farms in general are less than a hundred acres. For the most part they are family farms and are intensively cropped with an assortment of fruits and vegetables.

In order to sell their produce to better advantage, 136 growers contributed \$25 each last year to organize the Farmers and Growers Market. They elected Harold Cress president. June 27 this year marked the grand opening of the market at Second and Maine Streets, Cincinnati. The season will extend for five months. The market caters only to the wholesale and jobber trade.

Family effort and co-operation among families in their mutual fruit and vegetable growing enterprises are a combination of which Peach Grove is mighty proud. THE END



Harold Cress is a typical Peach Grove farmer. With exception of fruit harvest, he does all his own farm work.



A cow manure mulch is used by some growers in Peach Grove area to get newly-planted peach trees off to a good start.



Green manure crops such as rye protect peach trees on Peach Grove hillsides in winter; are a source of organic matter when disked under in the spring.



Vegetable plants—tomatoes, cabbage, cauliflower, pepper, eggplant—are started in hotbeds. Plants not needed for family farms furnish a sideline income.



John Egbert has 130 acres—30 in fruit, 25 in vegetables, remainder in pasture for 15 milk cows. He and son John are shown here transplanting tomatoes.



Elmer Wallenweber (right) talks over sprayer problems with dealer Homer Van Atta. Elmer operates 30 acres, all fruits with exception of acre of staked tomatoes.



Two acres of raspberries are grown on Wallenweber farm. Here blackcaps are being pruned. Canes are tied to wires. Summer cultivation is practiced.



Grapevines on Wallenweber farm are fertilized with ammonium nitrate to produce good cane growth, high yields. This 25-year-old vineyard still produces heavily.



Orchards in Peach Grove are planted on the contour around the ridges. This view of the Wallenweber orchards shows Stanley prune trees in the foreground.

State NEWS

- Joint Four-State Meeting Attracts Hundreds
- Nation's Thirst for Lemonade Creates Drain on Lemons

APPALACHIAN AREA—West Virginia on July 24 was host to the first joint four-state meeting of the horticultural societies of Virginia, Maryland, Pennsylvania, and West Virginia.

Several hundred fruit growers from the four-state area assembled at the 1,050-acre planting of the Byrd Orchards near Charles Town, W. Va. B. Beverley Byrd, son of Senator Harry F. Byrd and production manager of Byrd Orchards, described the growing practices in this 42,000 apple-tree planting, the largest single block of apples in the world so far as is known.

Varieties in this 14- and 6-year-old block include 11,000 Red Delicious, 7,000 Red Stayman, 6,000 York, 9,000 Rome Beauty, 6,000 Winesap, and 3,000 Golden Delicious. Red varieties are all planted to improved red strains. Byrd told visitors the orchard produced 380,000 bushels last year, about half its expected yield at full production. Trees are planted 30x33 feet, pruned to the modified leader system, cultivated during winter months with a disc, and fertilized annually with 500 pounds per acre of 10-6-4 fertilizer. Twelve sprayers are used to apply around 130,000 gallons of spray per day.

To control scab this year Byrd stated they dusted continuously during the wet period early in the season. It took 60,000 pounds of sulfur dust to cover the orchard two and one-half times. To obtain a finer finish on their fruit, Byrd said he is shifting to a mild spray program. Liquid lime sulfur, the old standby, is used only in the delayed dormant application; milder sulfurs and newer types of fungicides are used in the following applications.

E. Blackburn Moore, prominent Virginia grower and president of National Apple Institute and chairman of Virginia Apple Commission, addressed the group on the subject, "Growers, Processors and Apple Markets This Fall." Mr. Moore urged growers of this four-state area to band together and co-operate in establishing with processors a fair price for apples. If they do not co-operate, they again will be at the mercy of the processors, he cautioned.

The meeting included a tour of the Kearneysville Experiment Station plantings of apples, peaches, and cherries. Dr. Edwin Gould, entomologist in charge of the station, pointed out to growers results of tests of spray chemical combinations. Some combinations result in severe russetting of the fruit, others do not control pests, and still others give good finish and pest control. Of the latter, one of the best combinations was Orthocide 406 and lead arsenite. But when Orthocide



B. Beverley Byrd addressing four-state meeting.

406 was combined with parathion it gave very poor control of scab and severe russetting of most varieties, especially Golden Delicious. Tests indicate that much testing must be done on the combination of new chemicals before they can be recommended to growers for general use.—E. S. Banta.

NEW JERSEY—V. R. Gardner, veteran Michigan horticulturist, has joined the New Jersey Agricultural Experiment Station, New Brunswick, as visiting professor in horticulture. He will be on the staff for about a year and a half, replacing Dr. L. Fredric Hough, who is on leave of absence in Liberia.

WASHINGTON—A tentative budget of \$620,000 has been set up by the Washington State Apple Commission to promote the state's estimated 23 million bushel apple crop for 1952. About \$400,000 of the budget will go for advertising, the balance for supplemental service to the apple industry, including research on

apple handling, packaging, shipping, spray residue, and nutritional value of apples.

Richard Maultsby of Selah was recently chosen president of Yakima Fruit Growers Association by its board of directors. He succeeds Walter L. Bode of Ahlanum, who has assumed the position of general manager of the Big "Y," vacated by the retirement of J. Walter Hebert on July 1.

INDIANA—Fire blight and a heavy June drop because of winter injury has decreased the apple crop below that of several years. Farm orchards have little or no fruit. The Fruit Tree Survey now in progress shows that of the 4,200 acres of apples reported approximately 20 percent have been bulldozed or abandoned.—Ray Klackle, Sec'y, West Lafayette.

MICHIGAN—Cherry growers in the western area, especially north of Sparta, experienced serious losses owing to
(Continued on page 24)

FRUIT PEST HANDBOOK

(SIXTEENTH OF A SERIES)

CITRUS MELANOSE

MELANOSE, a fungus disease, was first noticed in Florida near Citra in 1892, and by 1896 it was rather general over the state. It is of sporadic occurrence in the Gulf Coast states of Alabama, Mississippi, Louisiana, and Texas, and is known but is not troublesome in California.

All species of citrus grown commercially are susceptible to infection but grapefruits, lemons, and limes are somewhat more so than sweet oranges and mandarins. Fruits, leaves, and twigs are susceptible when young but they become resistant when mature. Occasionally melanose is severe enough to cause some loss of foliage and twigs, but the economic loss comes from the unsightly appearance of the melanose markings on the fruits which reduces their market value.

Under the dry conditions in the irrigated citrus areas of the West, melanose is not a problem; but in Florida and occasionally in Louisiana and Texas where rain falls more frequently the causal fungus quickly invades the bark of dead and dying citrus twigs where it lives as a saprophyte. Spore-producing structures (pycnidia) of the fungus are soon formed within the dead bark, giving the twigs a pimply appearance.

(Continued on page 28)

Photographs at right show melanose spots on grapefruit leaves (top) and melanose spots and "tear streaks" on grapefruit.
USDA Photographs



BUILD FOR TOMORROW

When You Build Today

These orchard buildings are well designed, economical to construct, and will give many years of efficient service



Basic tenant house can be built as a single unit or a multiple family dwelling.



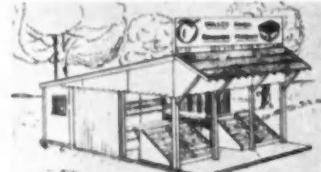
Pole-type packing shed of 30x70-feet has a six-foot loading and storage dock.



12x24-foot sections comprise machinery storage; workshop is two-story design.



10,000-bushel cold storage and packing house can be enlarged to 20,000-bushel.



Overhanging roof protects customer in this roadside market with movable rocks.

THESE PLANS ARE AVAILABLE

Working drawings showing construction details are included.

Tenant House.....	\$1.00
10,000-Bushel Apple Cold Storage..	1.00
Roadside Market.....	.50
Pole-Type Packing House.....	1.00
Machinery Storage & Repair Shed..	1.00

Send remittance to

AMERICAN FRUIT GROWER
Willoughby, Ohio

WASHINGTON FRUIT LETTER

- Serious Shortage of New Farm Machinery
- United Opposition to Delaney Recommendations Urged

By LARSTON D. FARRAR

Washington Correspondent, American Fruit Grower

A SERIOUS shortage of new farm machinery for the 1953 crops has been forecast by John Ransom, director of the Agricultural and Implements Division, National Production Authority, in the wake of the disastrous steel strike.

Production of machinery to meet the American farmers' needs for 1953 crops must get underway as early as possible, he declared, but inability of manufacturers to get delivery on steel already allotted to them may mean an industry setback of as much as 30 per cent off 1953 requirements.

USDA surveys indicate production of farm machinery at 16 per cent above the 1949 rate if the nation's food and fiber needs are to be met. Production as of mid-year, 1952, was estimated at about equal to the 1949 rate. The farm machinery industry has reported to NPA that some items it needs for production now are almost impossible to obtain.

A warning that has been carried here before is still apropos: Buy machinery you *need* whenever you can get it; take good care of what you have; do not fail to scrap parts or machines that are of no useful purpose.

FRUIT interests in particular and the produce industry in general are studying the third section of the report of the House Select (Special) Committee to Investigate the Use of Chemicals in Foods and Cosmetics with a view to countering some of its possibly adverse effects in the new 83rd Congress to convene in January.

In the last section of its report the majority of the committee, of which headline-hunter Representative James J. Delaney (D-N.Y.) was chairman, called for an amendment to the Federal Food & Cosmetic Act to require that chemicals used in or on foods be subject to the same safety requirements surrounding use of new drugs, or meat products.

As expected, the report was weighted heavily in favor of the Federal Security Agency (of which Food and Drug Administration is a part) as opposed to continued supervision of pesticides by the USDA.

Representative Walt Horan (R-Wash.), a Wenatchee apple grower

and an unusually keen observer, called the report "alarmist" in nature. He added that, if its recommendations were adopted, the result would "contribute to the difficulties of our producers of foodstuffs . . . and yet add nothing of assurance to the consuming public."

"This is a matter of grave concern," he averred.

The report, of course, was designed to be "alarmist," whether based on facts or not.

A *united* opposition to the change by fruit and produce interests and by pesticide and other industrial groups could stop the bureaucrats dead in their tracks.

THE Federal Reserve Board has reported that total assets of American agriculture, including the financial assets owned by farmers, now stand at a record \$169 billion, which points up the fact that there has been a continued appreciation in the value of good going farms, including fruit farms, for many years. In some states, Virginia, for instance, farmland has doubled in value, on an average, in the past 10 years.

The present dollar value of farm land and related holdings is some nine per cent higher than a year ago. Most of the increased value, the report noted, was due to inflation of the dollar, not actual increases in physical properties.

THE USDA has announced the publication of "Insects," its 952-page 1952 Yearbook of Agriculture. Each Congressman gets a quota of these for free distribution, so if you get your request in first, you may obtain one at no charge. Otherwise, the volume will cost \$2.50, postage paid, at the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

The new yearbook is designed to be a practical aid to farmers and city people in identifying insects, making better use of the helpful ones, and controlling the pests that cause an estimated \$4 billion in damage each year. An outstanding feature is a section of 72 color plates of the important insects of the nation.

Soil Applications of BHC Result in "Off Flavor" in Canned Peaches

IN THE spring of 1948 a preliminary investigation was started at the University Experiment Farm at Kearneysville, W. Va., to determine the cumulative toxicity of certain new organic chemicals in the soil. These chemicals are being used in peach and apple orchards for the control of insects and diseases. Benzenehexachloride (BHC) was included in these tests. Results of this work were reported by Edwin Gould and Elwood O. Hampstead.

In the tests BHC (10 per cent gamma isomer) was applied to the soil about the trees at three different rates equivalent to about 80 pounds per acre, 800 pounds per acre, and 2,400 pounds per acre. These amounts represent the approximate dosage of this chemical which would be applied in a spray schedule over a period of one year, 10 years, and 30 years. Treatments were repeated in 1949.

Remarkable Shoot Growth

After two seasons of growth, the apple trees in these plots were removed for observation of their roots.

The linear shoot growth in centimeters on BHC treated apple trees for the two seasons was 1,785 and 1,600 on the 800- and 2,400-pound treatments, respectively. The average shoot growth of checks was 1,028.

The roots were free of woolly aphis infestation in the BHC plots whereas in the check plots the tree roots were heavily infested. An absence of weeds and cover crop growth on the BHC treated soil was also observed. However, the control of weeds and woolly aphis did not seem to account for all of the difference in linear growth.

These differences were so striking that some fruit growers in the area decided to use this treatment on young trees in their own orchards. An estimated 100,000 apple, peach, and cherry trees were treated at the rate of 0.3 ounce of 10 per cent BHC per square foot of surface (the 800-pound per acre rate) where 10 square feet was the suggested treatment area.

Tests With Canned Peaches

It has been reported by several investigators that BHC used in the control of wire worm on potatoes and other vegetables and in the spraying of peaches for curculio control causes "off flavors" or a noticeable mustiness when these foods are processed. One investigator has found that 80

The authors of this report are R. S. Marsh, C. F. Taylor, Walter D. Foster, and Georgia M. Amick of West Virginia University.

to 94 per cent of the original amount of BHC can be recovered from a soil 18 months after application. Therefore, it seemed desirable to determine whether or not soil treatment with BHC would affect the flavor of peaches.

Since the apple trees included in the experiment had been removed, no apples for processing were available. However, in 1950 and 1951 samples of mature peaches from check plots and from trees in the test plots treated with BHC (800 and 2,400 pounds per acre) and sulfur (7,500 pounds per acre) were processed. In both years the fruit was canned with 40 per cent sugar solution using the same processing procedure in each instance.

These samples were tested by a taste panel composed of faculty and students at West Virginia University. "Off flavor" or mustiness definitely was found in the canned peaches from the 2,400-pound application of BHC each year. In 1951 the "off flavor" was still detected in the 800-pound per acre application.

Off Flavor but No Trace of BHC

These samples were also tested by two separate taste panels conducted by Dr. E. J. Abeling of the Beech-Nut Packing Company, large processors of baby foods. Again, definite "off flavors" were found in peaches from both soil treatments of BHC when these were compared with canned peaches from the control plots. However, this company's chemical analysis for BHC failed to show even a trace of this compound. Dr. Abeling concludes:

"Our interpretation of these results would be that possibly the off flavor is due to breakdown products of BHC since no residue was found on chemical analysis. These results are very interesting to us and we would like to co-operate in any further studies on this problem that you might undertake next year. To give you the canner's viewpoint we might add that our present policy would not permit us to buy this product."

From these observations it must be concluded that soil treatments with BHC cannot be recommended for young peach trees at rates used in these tests. It is hoped that in the more comprehensive toxicity tests now in progress a chemical will be found having all the advantages of BHC which does not have this serious flavor disadvantage in the treatment of young peach plantings. THE END

The QUESTION BOX

Where can I get information about an automatic fruit picker?—New Jersey

The March, 1952, issue of AMERICAN FRUIT GROWER contained an article about an automatic fruit picker operating on a vacuum principle. It is manufactured by Farm Machinery, Inc., 10 Chapin Street, Canandaigua, N.Y.

What strawberry varieties are recommended for Illinois conditions?—Illinois

The following new varieties were highly promising in 1951: Armore, Empire, Premier, Robinson, Sparkle, Tennessee Beauty, and Vermilion. A. S. Colby, Illinois small fruits specialist, recommends trying small plots of these varieties and picking the best ones for more general planting.

Premier is still one of the best early-maturing sorts. Robinson, Empire, Sparkle, Tennessee Beauty, and Vermilion follow Premier in season. Armore is a little later under normal conditions. Some Illinois growers feel that Bellmar, a standard sort which has not been grown very commonly during recent years, has sufficient value to be more widely planted.

Could you tell me where I can obtain bulletins on making cider vinegar?—Wisconsin

I suggest you write for the following bulletins which will tell you how to make cider vinegar: Circular No. 148, "Making Cider Vinegar on the Farm," New York State Agricultural Experiment Station, Geneva, N. Y.; Circular 332, "Home and Farm Preparation of Vinegar," University of California, Agricultural Experiment Station, Berkeley, Calif.; and Farmers' Bulletin No. 1424, "Making Vinegar in the Home and on the Farm," Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

What is the ripening time and resistance to blight of the Maxine pear?—Illinois

In the latitude of Urbana, Ill., Maxine ripens around the first week in September. Blight seldom is a serious problem with the Maxine. J. C. McDaniel of the University of Illinois notes that Maxine is a fruit of good size and quality and one of the older pear varieties.

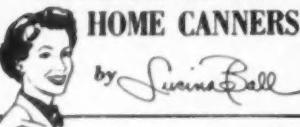
Can you tell me where I may purchase a rake or wire-fingered scoop for harvesting wild lowbush blueberries?—Pennsylvania

Try the Maine Blueberry Growers Cooperative in West Rockport, Me.

Can insects be controlled by electronic rays?—Ohio

The "Ukaco Process" is an electronic method which is being tried out in a number of places by the Pennsylvania Farm Bureau. J. O. Pepper, entomologist at State College, Pa., reports that the machine had no effect on some legume fields that were treated for spittlebug. A great deal of work has been done trying to control insects with electronic machines but with little success.

MORE HINTS FOR HOME CANNERS



Tomatoes and peaches lead in home-canning popularity. These favorites will soon be at their peak in your area. The more you can, the more you save!



How many Jars?

A bushel of peaches yields 18 to 24 quart jars; tomatoes, 15-20 quarts. By now, you've probably filled all last year's jars and will need new ones. Be sure you get Ball Dome Jars, the only kind that comes with those wonderful "Touch-Test" Ball Dome Lids.

The Touch of Safety
Don't risk losing a single jarful by "guesswork sealing." Ball Dome Lids give positive protection. Just press to test. Dome down, jar sealed. So easy—so sure. Dome Lids have cream-white enamel lining, red rubber seal, other plus features. You pay no more; you can't buy better!



Know your Altitude
When you use a hot-water-bath canner for fruits and tomatoes, it's important to know how far you are above sea level. The higher the altitude, the longer jars must be processed. See my free booklet for details.



M-M-M! Home-Made Jelly!

Everybody loves home-made jams and jellies. Make plenty, as the various fruits ripen. Liquid or powdered pectin produces more glasses with less boiling. Your dealer has Ball Jelly Glasses in two sizes: third-pint squat, half-pint tall.



Recipe Booklet—FREE
Simplify your home canning. Send card for my new FREE booklet of recipes, timetables. Home freezing included. Yours for the asking. Address:

BALL BROTHERS CO.,
Dept. AG3, Muncie, Ind.



© 1952, B.B.C.



Eleanor Gilman

Apple orchard planted by Dr. A. B. Burrell in Clinton County, New York, has a double-row windbreak of red pines and poplars right through it as well as around its borders.

DOUBLE-DECKER WINDBREAK

WHEN scientific-minded Dr. Arthur B. Burrell, Cornell University fruit specialist, decided to have an apple orchard of his own, he planted the 100 acres of trees on a slope to escape serious frost troubles.

For added protection of his orchard near Peru, in Clinton County, New York, he surrounded the orchard with a windbreak of trees and planted a windbreak right through the orchard as well.

From his own experience, Burrell believes there should be more such windbreaks in the Northeast where they are not common. He cites such advantages as: The windbreak reduces effects of winter winds that would cause excessive chilling; provides bad-weather shelter for pol-

inating bees; reduces windfalls caused by winds during the growing season.

The windbreak shown above is a "double-decker" grown on the installment plan—rows of lombardy poplars planted side-by-side with red pines 18 years ago. The quicker-growing but shorter-lived poplars reached 60 feet in height in 15 years. They will be succeeded by the slower-growing, more permanent pines.

Burrell tried various other trees—Chinese elm, soft maple, white pine—but found the poplar-red pine combination best. His young orchard, a pacemaker of the Lake Champlain region, produces from 50,000 to 60,000 bushels of salable fruit per year.—William Gilman

HEALTH WITH APPLE CIDER

(Continued from page 12)

Actually, he has good reason for expanding. His business has become much more diversified than any business has a right to be. A few years ago, for instance, Ed noticed some Pliofilm chicken bags at a local wholesale grocery and he bought them and filled them with apples. The bags of apples were placed on the counter at his roadside warehouse where, he retails his cider and they were all sold within a few hours. He now wholesales his apples in Pliofilm bags all over central Washington.

Ed is also the father of apple cider "Chooz," which is his trade name for apple cider frozen on a stick. The frozen cider is now being sold all up and down the West Coast in six flavors. Ed also has been selling his own canned peaches and pears for the last two years.

His expansion program calls for

the addition of two new cider presses, to be housed in his new concrete block press house. He is also planning to install a quick freeze unit for apricots, peaches, and prunes to be packaged in 12-ounce units. The building will also house a cannery for canning his own fruit.

THE END

WHEN PRICES ARE HIGH
and material is scarce, it pays to have more than one source of supply.

It is easy to shop around with a copy of AMERICAN FRUIT GROWER's annual July Directory & Buyer's Guide Edition.

Here you will find a complete list of sources of supply of everything for the Fruit Farm. Refer to your copy of the July Directory Number whenever you are in the market for equipment and supplies.

GRAPE JUICE MARKET

(Continued from page 13)

in the Yakima Valley of Washington. The juice, rather than the grapes, is shipped to Reedley for blending. The Cella Company, however, is now growing in its own vineyard a large proportion of the Concord grapes required for juice production.

Quality Grapes Used

The vinifera grapes are grown in nearby vineyards and are picked with great care in order to exclude all unfit bunches. They are crushed and stemmed mechanically in stainless steel equipment soon after picking. The crushed grapes are flash heated in a large continuous pasteurizer to a high enough temperature to extract the color and to break down the grape tissues sufficiently to press readily.

The hot grapes are pressed and the juice is cooled in tubular stainless steel heat exchangers and then refrigerated to a low temperature by passage through a Cyclops continuous tubular refrigerating unit.

The cold juice is stored in 10 Lithcote-lined steel tanks, each of about 93,500 gallons capacity, and is held at not above 26° F. until bottled. The storage room itself is heavily insu-

lated and held at not above 26° F. by circulating refrigerated air.

The Lithcote lining protects the juice against contact with the steel of the tanks. At the low temperature used fermentation and molding do not occur, although as a precaution ultraviolet "sterilamps" are installed in the headspace of each tank to kill yeasts or mold spores that may gain entrance.

During cold storage the juice deposits its excess dissolved cream of tartar, which otherwise would crystallize out in the bottled juice. Also, suspended solid particles settle and on that account the juice may be filtered more readily after storage.

Cold Juice Is Filtered

When taken out of storage for bottling the juice is filtered cold. It is blended with filtered Concord juice and adjusted to standard Balling degree and acidity.

The juice is flash heated in a tubular stainless steel Chisholm-Ryder pasteurizer and filled into steam-heated bottles at a temperature high enough to kill yeasts and mold spores. The bottles are capped with Crown Caps that are sterilized in a

continuous stream in a chamber heated with super-heated steam.

By sterilizing the caps the danger of survival of yeasts or mold spores on the surface of the cap liner or in its cork or paper backing is abolished. Since installing the cap sterilizer there has been no spoilage, reports Ohanesian.

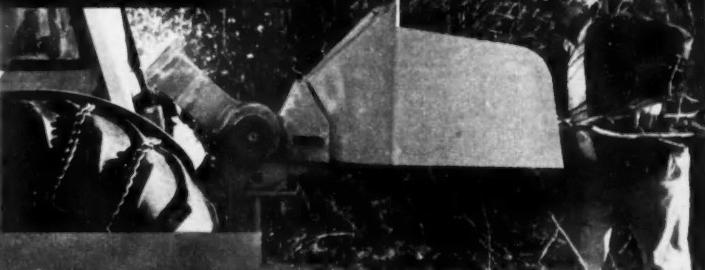
A Horix multisipout bottle filler is used. It operates automatically and at high speed. It is fed from a small stainless steel tank located between the pasteurizer and the filler. The filled bottles are washed and cooled on a slowly moving conveyor as they pass through sprays of water of progressively decreasing temperature.

The cooled bottles are inspected, labeled with the company's Betsy Ross labels, and packed in fiberboard cases. Production this year will exceed 1,000,000 gallons.

Extreme sanitary precautions are taken throughout the plant. Floors are of concrete and easily hosed down for cleaning. All equipment is scrupulously clean and the work rooms neat, clean, and free of rubbish, boxes, etc. An example of the care taken is the requirement that workmen change their clothes in an anteroom equipped with sterilamps. Sterilized uniforms are worn in the plant. THE END

THE FITCHBURG CHIPPER

• There just isn't any brush problem if you use a Fitchburg Chipper. As fast as prunings are cut from the trees, they can be fed into the hopper and converted into useful mulch. The United States Dept. of Agriculture recommends wood chips for the generation of valuable nitrogen in the orchard floor. The Fitchburg Chipper is the fastest and most economical machine for this purpose.



EASY BRUSH DISPOSAL

from fast working power-driven loppers and shears is now possible with the Fitchburg Chipper. This sturdy, powerful and fast cutting machine can be either tractor or truck mounted. It cuts either large or small branches with equal facility. Many units now being used by commercial growers have paid for themselves in two seasons. Increase your orchard profits.

Write today for prices and details.
State maximum size of prunings.

FITCHBURG ENGINEERING CORPORATION
FITCHBURG MASSACHUSETTS

DURAND PORTABLE POWER CONVEYOR

This is a complete fruit handling unit for use in loading and unloading trucks, moving fruit baskets and materials in packing house or storage. Straight or reversible drive. Can be tilted up or down. Lengths 12-21 ft. The DURAND is a low cost, all-steel, light weight, portable power conveyor. Write today. Tell us your needs.

A Low Cost Labor Saver

DURAND COMPANY

WOODBURY GEORGIA

Versatile

HALE Centrifugal Orchard Sprayer sprays at any capacities and pressures, up to 100 G.P.M. at 600 lbs. at fast tractor speed. No relief valve necessary. The most versatile sprayer on the market.

Write for Bulletin No. 302, State Size of Grove or Orchard.

SPRAYER DIVISION

HALE FIRE PUMP CO.
CONSHOHOCKEN PA.

TRAMPLING OUT THE VINTAGE

By Joseph A. Cocannouer

A powerful story of farming on poor, over-worked land told in The tragedy of creation of habit and custom when they accept modern soil management and to their own ultimate destruction is the theme of this inspiring and interesting book. Joe Cocannouer, the author, is the Father of our present system of teaching vocational agriculture in our public schools. Many families which the author describes have their counterparts in every agricultural community. No one can read this book without becoming a better farmer and converting the bitter vintage of grapes into sound and mellow fruit.

Send postpaid on receipt of \$2.75

AMERICAN FRUIT GROWER
106 Euclid Ave., Willoughby, Ohio

PERMANENT ANTI-FREEZE

POLORZONE (Ethylene Glycol) U.S. Spec. Retail at \$3.75 gal. Your price—\$2.75 gal. in 4-gal. cases. Save \$1.00 per gal.

WATTS CO.
418 AF Woodland, Toledo 2, Ohio

WHISKEY
BARRELS & KEGS
FOR CIDER
AND WINE

MASLOW
COOPERAGE CORP.

PLANTS
Brooklyn, N. Y.
Louisville, Ky.
Owensboro, Ky.
Fresno, Calif.
Baltimore, Md.
Peoria, Ill.

WRITE TODAY
FOR PRICES

18 Court St.
Brooklyn 2, N. Y.

SUCCESS? It's Spelled "A-P-P-L-E"

Round-the-calendar attention to the job has brought deserved recognition to this energetic and inventive "Apple King"

By SIDNEY SNOOK

If Lester Harris, a Kentucky farmer and fruit grower, were asked to spell the word, "success," he doubtless would promptly respond, "a-p-p-l-e."

The field of his success is a 24-acre apple orchard in McCracken County in the extreme western corner of



Lester Harris and his wife, Marie, who is his most conscientious helper, examine samples of their high quality apples. Left—the apples taste mighty good, too!

Kentucky. Because of his effort toward orchard improvement and his skill in producing fine fruit, he now is wearing the title of Kentucky's "Apple King."

There is a saying going the rounds among orchard men that there really should be only two classes for exhibitors at the annual Kentucky State Fair: a class for Lester Harris and a class for all other exhibitors. In last fall's event, Harris won a total of 52 premiums. His prize money totaled \$251.

That sort of thing has been going on now for the last eight years. In the 1950 competition he took every "sweepstakes" premium.

Uses Progressive Methods

Constant effort directed toward betterment of his orchard and his fruit growing practices is the source of his achievement. Total production in 1950 was approximately 10,000 bushels, his heaviest production year, and brought him an average price of \$2.25 a bushel. Some fruit sold as high as \$3.50 a bushel.

Last year's production was somewhat lighter because of extremely cold weather in the winter of 1950 which caused severe tree damage. Fifty trees of one variety were killed.

As an orchardist, Lester Harris is receptive to new ideas and practices and co-operates closely with the horticultural department of the University of Kentucky. He even extends his search for the newest and best in orchard methods to the point of invention. He has invented the harvesting apparatus shown on page 11.

Mr. Harris finds that this picking ladder can be used advantageously also in other farm operations; barn construction, as one example. He expects to apply for a patent on his invention. Its only drawback, he finds, is that all of the orchard workers practically wage battle over who will use "the ladder."

Lester Harris has been producing apples for the last 15 years. Prior to that time he was doing general farming. In 1936 he set out his first apple trees. Although his orchard represents his major interest, he also has four acres of strawberries as well

AMERICAN FRUIT GROWER

as tobacco, corn, and soybeans in a 75-acre farm across the road from his orchard. More apple trees were set out in 1940 and again in 1943 and 1947.

Labor a Serious Problem

Right now, Mr. Harris says, his orchard is coming into its best commercial stage. Labor is his biggest problem; and a serious problem, too. Government construction of a \$500 million atomic bomb plant practically within a stone's throw of his apple orchard is steadily siphoning off his labor along with farm labor all over that section.

Practically all of his crop is sold to Paducah, Ky., commission firms with some of it sold for long-distance trucking to Texas and other southern areas.

Harris follows closely the spray program worked out by the Kentucky extension department. Paramount in his orchard development is emphasis

sufficiently high to permit good air circulation.

Harris follows a light pruning program. Fertilization is heavy. He uses cyanamid in winter for strong bud growth and tree vigor. Vetch is his ground cover crop. He practices light cultivation.

Long Harvest Season

Principal varieties in the Harris orchard include both standard and double red sports. The state extension department has done experimental planting of some of the newer varieties. There is fruit on the trees

in the Harris orchard from the early June Lodi to the late October varieties. From the standpoint of both growing and marketing, Harris has found Golden Delicious the best seller.

Spraying, pruning, cultivation, harvesting, grading, and packing all add up to what Lester Harris describes as a round-the-calendar job. Right at his side in carrying on this job is his wife, Marie. His aim is to build up what now is recognized as one of the best apple orchards in the state and to strengthen his claim to the title of Kentucky's "Apple King."

DIRECTORY ADDITION

TWO products in which many growers are interested were inadvertently omitted from the July Directory Issue of AMERICAN FRUIT GROWER. For the convenience of readers they are listed below. We suggest you clip these listings and paste them on page 34 of your Directory.

FUNGICIDES

Glyxalidines (Crag Fruit Fungicide 341) Carbide & Carbon Chemicals Co., A Div. of Union Carbide & Carbon Corp., New York 17, N. Y.

WEED KILLERS

Sodium 2,4 Dichlorophenoxyethyl Sulfate (Crag Herbicide 1) Carbide & Carbon Chemicals Co., A Div. of Union Carbide & Carbon Corp., New York 17, N. Y.

on proper spraying. He advocates a heavy spraying program. "Once every two weeks after the spring spraying," he says,

Blossom Thinning Spray Used

Two new sprays recently have been added to his schedule. One is for thinning fruit blossoms. "This will mean larger fruit," Mr. Harris says, "but the problem is to keep from knocking off all of the fruit blossoms." The other spray is to intensify the color of the fruit on the tree.

To insure proper pollination, Harris planted a Black Ben Davis in each block of nine trees. He has 34 to 38 trees to the acre. The orchard is set in clay loam soil and on ground suffi-



Ship Your Fruit in Perfect Condition

FORT WAYNE APPLE BOXES and KYS-TRAY PAK

- Better protection in transit
- More profitable sales through less spoilage
- More consumer acceptance

NEW KYS-TRAY PAK



THESE PACKAGES OFFER:

- Minimum fruit damage
 - Increased advertising
 - Cleaner and neater package
 - Less storage space required
 - Designed to meet packers' needs
- Also Roadside Fruit Baskets and 10-lb. Tomato Baskets



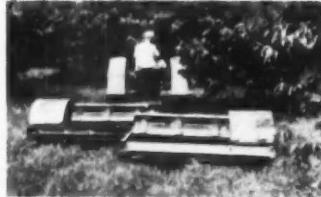
Buy with Confidence

Fort Wayne
CORRUGATED PAPER COMPANY

130 EAST DOUGLAS AVENUE

FORT WAYNE 1, INDIANA

*Mow, Cultivate,
Dispose of Trash—
IN 1 OPERATION!*



Here's a Marden Duplex Cover Crop Cutter 3' in a Michigan orchard. In one operation it mows, scatters the soil and disposes of trash without removal, chipping or burning. No damage to roots, limbs or fruit. This is the ONLY implement that can do this job. Replaces mowers, disc harrows, clippers and the need for any other type of cultivating implement. Other Marden Duplex Cutters available for weed and brush control. Write for facts today, giving tractor type and crop.

Marden duplex

Renovates the soil while controlling competing vegetation.

Marden Manufacturing Company
AUBURNDALE, FLORIDA

4 CYCLE ENGINES

LAUSON

**the
engineers
ENGINE**

For over 30 years, Lauson engineering has been famous for NEW design advantages in the engine field. Today, the LAUSON engine is renowned for its dependability, craftsmanship and trouble-free operation . . . among engineers and consumers alike! That's why so many folks say, "If you do it with POWER . . . do it with LAUSON!"

LOOK FOR LAUSON ENGINES ON:

1. Power Mowers
2. Garden Tractors
3. Power Plows
4. Power Sprayers
5. Generators
6. Air Compressors



4 CYCLE ENGINES

LAUSON

For Bells, Inc.
**THE LAUSON
COMPANY**
Box 1000, Dept. B
Orange, N.J.
Division of
Hart-Cole Company, Inc., Canada, Hart-Lawson Co., Ltd., Montreal

A TREE-RIPENED PEACH

(Continued from page 9)

The amount of bruising sustained by peaches packed in these paperboard containers and shipped a distance of 660 miles has averaged only four per cent, and the bruising which did occur was not severe. One handicap of this container is that it takes a little longer to chill the fruit to 45°F. than when the fruit is packed in bushel baskets.

This cell-type box comes in three sizes: the 120 count box which is designed for 2 to 2½-inch fruit, the 96 count container which holds 2½ to 3-inch peaches, and the 80 count box which will pack 2½ to 3-inch fruit.

While not entirely satisfactory, this container thus far is the only box Louisiana growers have found that will do the job. Retail stores to whom

per day on Friday and Saturday as contrasted with an average of 10½ bushels per day the following weekend when they were selling green ripe Elbertas shipped in from another area. And the latter were priced much lower than the riper Elbertas.

Average Purchase: 2.4 Pounds

We also discovered that consumers in the four southern cities lying within our marketing range would purchase an average of only 2.4 pounds of peaches at time. It didn't seem to make any difference from which area the peaches came or whether the price was high or low, or whether it was in June or in September; 2.4 pounds was the average size purchase over the three years we ran this study. If 2.4 pounds was what the consumer wanted at one time why not give her this quantity already wrapped up? These prepackaged units would reduce the throw-away loss to the stores and at the same time lengthen the shelf life of the fruit.

On the strength of this information a series of prepackaging experiments was conducted and it was found that the housewife wanted a package with a large window and eight 2¼ to 2½-inch peaches per unit. These prepackaged peaches were very popular as long as the selling price was no more than a cent and a half a pound above the bulk fruit. When the price went higher sales resistance began to build up. Unfortunately the packaging costs amounted to a little more than a cent and a half per pound and this size unit therefore has not been used commercially.

Another incident will indicate the tenacity with which the consumer clings to the 2.4 pound factor in that area. At the beginning of the 1950 season peaches were retailing at 27 cents per pound which automatically placed a retail price of 64 cents on the eight-peach consumer unit.

We figured that very few women would be willing to pay 64 cents for eight peaches and forthwith designed a unit holding four peaches which retailed experimentally for 33 cents. Both packages were displayed one day in a Shreveport store in about equal numbers. By 2:30 P.M. all the eight peach units but scarcely any of the smaller ones had been sold!

The American housewife doesn't have to be sold on peaches—she already is. BUT she is going to insist that they reach her fully colored, tree ripened, and ready to eat. Let's work together—growers, buyers, and retailers—to give the consumer the kind of peach she wants.

THE END

HANDY ANDY



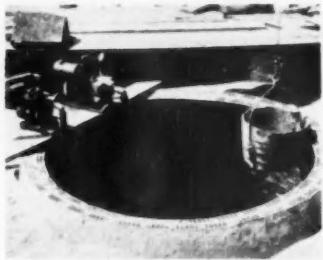
Orchardist Louis Hull, Hillsborough County, Hollis, N. H., finds that his interchangeable platform-skid is his biggest timesaver about the farm. Bolting wooden blocks to a standard four-wheeled farm chassis, he mounted a 6x12-foot skid constructed of boards and two 4x4 braces to make a platform body. Chains are attached to stake irons bolted to 4x4's for towing when body is used as a skid. A platform this size will hold approximately 150 boxes of apples.
—Charles L. Stratton.

these peaches have been sold apparently recognize the value of the "cell pack" for they refuse to accept Louisiana peaches packed any other way.

Quick Turnover

The Louisiana housewife has demonstrated conclusively that she appreciates high quality in peaches. Records of two years' standing taken in a large supermarket in New Orleans and another in Baton Rouge show that tree-ripened peaches moved four to five times more rapidly than hard ripe peaches packed in the customary manner. It was also found that these mature fruits held up as long as greener peaches.

The New Orleans store, for example, moved an average of 61-bushel equivalents of tree-ripened Elbertas



A dug well with double brick wall construction, which is 16 feet in diameter.

A Word for the Dug Well

THERE are vast water resources which are not being developed because of the belief that dug wells are not as satisfactory as drilled wells. However, where a drilled well is not successful a dug well oftentimes will yield large quantities of pure water.

Unfortunately, there are few people today who know how to construct a dug well properly. Ralph Vaux of Madison, Ohio, is one of these, as was his father. Today Vaux with his partner, Wm. McElwee, make water available where others have failed.

Vaux has achieved a high degree of purity in the water through tight construction of his wells. He starts the well with a laminated wooden ring which may be six, 10, or up to 20 feet in diameter, depending on the volume of water desired. On the wooden ring a brick wall is built allowing small spaces between each brick to allow for infiltration of water.

The wall is sloped inward, and as the wooden ring is lowered by digging away beneath it, the space between the brick and the edge of the hole becomes wider and wider. This space is filled with pure silica gravel which acts as a filter and prevents the openings between the bricks from filling up with clay or silt.

Only the bricks on the lower four feet of the well wall are spaced apart. Above this point the wall is cemented solid and plastered on the outside. Thus surface water percolates down through the gravel before entering the well. Wells have been dug to a depth of 50 feet or more, but the average dug well is about 25 feet in depth.

Because of his success with dug wells, Vaux is booked up for work a year in advance. He has just completed a double brick wall well 16 feet in diameter and 29 feet deep for Wayside Gardens at Mentor, Ohio. This well delivers at the rate of 5,000 gallons an hour and will be used for irrigation purposes.—R.T.M.

SEPTEMBER, 1952



A few turns of the handle of the WHITE MOUNTAIN APPLE PARER, CORER, and SLICER and an apple is ready for cooking. Not only pares, but cores and slices—all at once in 5 seconds. Leaves the fruit in spiral form which one cut of a knife transforms into dainty ring slices, or shapes, for pies, sauce, Apple Betty, puddings or salads. Razor-sharp paring means more fruit to eat—a big saving in waste. Parents to table. Lasts a lifetime. It's the modern way. Turns a tiresome task into a pleasant chore.

Buy from your dealer. If he can't supply you, we will send direct on receipt of money order. Only \$3.75 postpaid. Satisfaction guaranteed. Send 3c postage for wonderful old apple pie recipe.

GOODELL COMPANY

Established 1875

Dept. A Attn: New Hampshire



STANDARD LITEWATE -- Sectional Roller Conveyor

—ideal for loading and unloading. Handles commodities up to 60 lbs. — moves bags, cases, cartons, hollow bottom, narrow, cleated and irregular packages or articles not suited to wheel conveyors. Less pitch required — operates at grades as little as $\frac{1}{4}$ in. to $\frac{1}{2}$ in. per ft. Interchangeable spacing of rollers—from $1\frac{1}{2}$ in. to 12 in. centers. Available in 10 ft. and 5 ft. straight sections and 90° and 45° curves. Keep LITEWATE conveyors handy in your shipping room — carry a section on your truck. For complete information write for Bulletin AFG 92.

STANDARD CONVEYOR COMPANY North St. Paul 9, Minnesota



A NEW, EASIER WAY TO PROP BRANCHES

Collecting tree props takes a lot of time. Selecting a prop for a particular branch also takes unnecessary time and effort. Save yourself this trouble and make it easier and safer to prop branches either vertically or horizontally by using . . .



AFC ADJUSTABLE TREE PROPS

15c apiece
12 for \$ 1.50
30 for \$ 3.00
100 for \$10.00

AMERICAN FRUIT GROWER, 106 Euclid Avenue, Willoughby, Ohio

Please send me (No.)

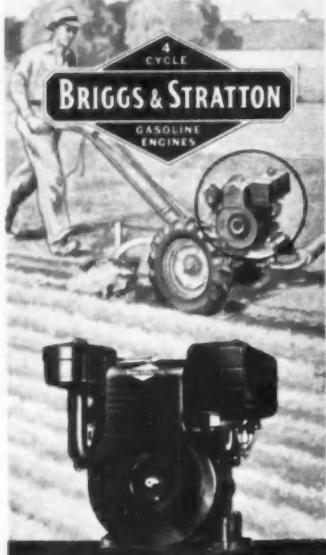
Attached is \$

Name _____

Address _____

City and State _____

Offer good only in U. S. A.



Preferred power on garden tractors — with plowing, cultivating and other types of attachment, just one of many hundreds of applications in farms and homes the world over, most widely used single cylinder gasoline engine.

You know you have the right power — the preferred power — on farm, orchard, and garden machines and equipment when the power is Briggs & Stratton single cylinder, 4-cycle, air-cooled gasoline engines.

Briggs & Stratton Corporation
Milwaukee 1, Wisconsin, U. S. A.



**HUNT'S GRAFTING WAXES,
RODENT REPELLENT, ETC.**
MICHIGAN BEE & FARM SUPPLY
310 N. CEDAR LANSING 1, MICH.
"Successor to M. H. HUNT & SON"

WANT TO MAKE WINE?
We supply the right grape vines (French Hybrids) and the wine-making requisites. Circular.
BOORDY VINEYARD RIDERWOOD, MD.



Banta

Horticultural leaders of four-state Appalachian area of Maryland, Pennsylvania, Virginia, and West Virginia, who helped organize first joint meeting of horticultural societies of these states, which took place in West Virginia, July 24, 1952, are shown above, together with visiting horticulturists from Ohio and New Jersey.

Front row, left to right: Charles Packard, president, Pennsylvania society; H. R. Varney, dean, West Virginia College of Agriculture; E. Blackburn Moore, president, National Apple Institute and chairman, Virginia Apple Commission; W. P. Jenkins, head, department of horticulture, Virginia Polytechnic Institute; John Ruef, secretary, Pennsylvania so-

cietry; and Clifford Gordon, president, West Virginia society.

Back row, left to right: Sam Dillon, president, Maryland society; Arthur Farley, secretary, New Jersey society; A. F. Vierheller, secretary, Maryland society; C. W. Eilenwood, secretary, Ohio society; Robert Rea, president, Virginia society; John Watson, secretary, Virginia society; C. R. Miller, secretary, West Virginia society and secretary-manager, Appalachian Apple Service; R. S. Marsh, head, department of horticulture, University of West Virginia; Tom Mackemer, vice president, West Virginia society; and R. E. Larson, acting head, department of horticulture, Pennsylvania State College.

STATE NEWS

(Continued from page 15)

"wind whip" of sour cherries and to cracking of sweet cherries. This damage reduced the July 1 sour cherry estimate of 79,500 to approximately 55,000 tons and the July 1 estimate for sweet cherries of 9,100 to 8,300 tons. Nashthaleneacetic acid, as suggested for and used to some extent in the Pacific Northwest to reduce cracking of sweet cherries, was of no value in Michigan in 1952.

There is considerable interest by growers in consumer packaging of apples. A small portion of the 1951 McIntosh, Red Delicious, and Jonathan crop packed in cellophane bags received good customer acceptance.

TCPA (Color-Set, Fruitone T Stichol) will be used extensively on apples in 1952 to reduce preharvest drop. Growers reported favorable performance of this compound in 1951 in holding the fruit on the tree even though in many cases the color of the fruit was not improved. This compound used at 10 p.p.m. on Duchess thus far this season has given very good results.—Arthur E. Mitchell, East Lansing.

CALIFORNIA—Perhaps the most scientific job of price setting done in the fruit industry in California is the final price arrived at by the California Canning Peach Association. The association controls some 43 per cent of the total tonnage of cling peaches and sets the price for the industry. Last year the price was \$7.50 a ton to the grower. This year they asked for and got \$65 a ton or 3½ cents per pound less than last year. Canned clingings constitute the largest canned fruit pack in the U. S.

Bartlett pear growers are considering some sort of industry association as is enjoyed by the cling peach growers. The reason is the disappointing price received

by growers of Bartlett pears this year and the tremendous swing in prices from one year to the next.—Jack T. Pickett.

NOTE from various areas on effect of drought and storms on fruit crops:

MAINE—Blueberry crop will return only 10 to 20 per cent. Normal average return to growers, \$2,300,000. Estimated loss of 85,000 bushels of apples from hail and windstorms in early August in Winthrop and North Monmouth. F. J. McDonald, secretary, Maine State Pomological Society, Monmouth, reports some novel methods of irrigating included dumping water from tank trucks at top of slopes and pouring water around trees from tanks and sprayers. Wilson and Frank Morse are among few growers who have orchard irrigation systems.

CONNECTICUT—Orchard tour and chicken barbecue at Bishop Orchards, Guilford, Aug. 2, served also as celebration of breaking of drought. Rain came down in sheets, reports Sec'y H. P. Hollister, Storrs.

VERMONT—Rains early in August helped break a dry spell which had not yet become severe enough to reduce fruit size or quality. Sec'y C. Lyman Calahan, Burlington.

ARKANSAS—Peach crop has turned out much better than hoped for, reports Sec'y Earl J. Allen, Fayetteville. Growers are estimating one-half of strawberry plants have been lost. Favorable moisture conditions from now on could improve this situation.

TENNESSEE—Undersize fruit cut fresh market strawberry crop to half of normal and curtailed renovation of plantings for

AMERICAN FRUIT GROWER

'53. Early apples had to be sacrificed because of undersize. Size of fall and winter apples not too badly hurt yet, continues Sec'y A. N. Pratt, Nashville, but average one-fourth inch below normal for this date (Aug. 14) except in a few orchards with irrigation or light fruit set. Much interest in irrigation.

VIRGINIA—"Last minute" rains increased size of peaches tremendously. Apple estimates made earlier may materialize says Sec'y John F. Watson, Staunton.

MARYLAND—Fruit crops came through with rather good results, reports Sec'y A. F. Vierheller, College Park.

OHIO—Drought has reduced size of apples and peaches in some areas; however, general quality of all fruits is good.

The largest annual in the history of the National Peach Council is available to growers. Its well-printed 82 pages contain valuable data and addresses presented during the annual meeting last February in St. Joseph-Benton Harbor, Mich. Copies are available from Dr. M. J. Dorsey, secretary, 1502 S. Lincoln, Urbana, Ill.

Sec'y C. W. Ellenwood, Wooster, reports, also, that more growers are resorting to the "pick your own" style of harvesting.

COLORADO—Peach crop peak about Sept. 5; prospects for an excellent crop, says Sec'y D. Marcue, Grand Junction, except in western slope area where microscopic silver mite has picked a most critical moment to attack—two weeks before harvest when sprays, which leave an objectionable residue, cannot be used.

IOWA—What a state! Sec'y W. H. Collins, Des Moines, says it apparently hasn't suffered to date from drought. Red spider and European red mite, however, are reported troublesome.

CALIFORNIA—The nation's thirst for lemonade created a drain on fresh lemon supplies, and sales of frozen concentrate for lemonade are expected to skyrocket this year to 3½ to 4 million cases compared with 200,000 in 1949.

CALENDAR OF COMING MEETINGS AND EXHIBITS

Oct. 6-11—Third annual apple harvest festival, Charlottesville, Va. Queen to be crowned.—Ross E. Mohney, Director, Box 112, Charlottesville.

Oct. 23-Nov. 1—National Apple Week. Full information available from National Apple Week Association, 1302 18th St., N.W., Washington 6, D.C.

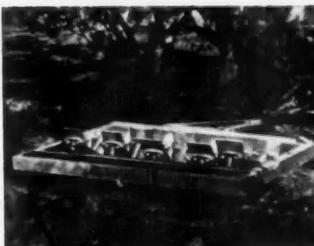
Nov. 20-21—Oregon State Horticultural Society 67th annual meeting, Memorial Union Bldg., Oregon State College, Corvallis.—C. O. Rawlings, Sec'y, Corvallis.

Dec. 2-6—Vegetable Growers Association of America 44th annual convention, Hillsboro Hotel, Tampa, Fla.—H. D. Brown, Sec'y, Hort. Dept., Ohio State University, Columbus 10, Ohio.

Dec. 4-8—Kansas State Horticultural Society annual meeting, Hutchinson.—H. L. Drake, Sec'y, Bethel.

Dec. 4-8—Connecticut Pomological Society annual meeting, Hotel Bond, Hartford.—S. P. Hollister, Sec'y, Storrs.

SEPTEMBER, 1952



The Edwards Culti-Cutter in operation. Note tendency for blades to cup ground. Blades can be controlled in depth, each rotor operates independently. Does not disturb roots.

For information or prices in Area East of Mississippi River write Michigan Orchard Supply Co., Dunkley Ave., South Haven, Michigan.

Lick Cover Crop or Brush Problem with the Culti-Cutter

The Edwards Culti-Cutter—the machine you need for cutting cover crop or brush. Use in vineyard, orchard, hop yard or sage land! Cutting widths from 48" to 96". Pockets from blades aid in irrigation, reduce erosion.

EDWARDS
EQUIPMENT CO.
4312 Main St. YAKIMA, WASHINGTON

The Best of the NEW and OLD Varieties

105 years of nursery know-how
to give you the best.

- Apples
- Peaches
- Monimorancy Cherries
- Sweet Cherries
- Pears
- Plums



Write today for our Grower's Quantity Price List. If you are a lover of roses, bulbs, peonies, flowering shrubs, and trees, ask for our new Fall color catalogues.

THE MONROE NURSERY
ILGENFRITZ NURSERIES, Inc.
Dept. F.G.
Desirable Territories open for salesmen of fruit trees and general stock.

If it's for an orchard large or small, we have it. We would like to send you our latest free catalogue!
TYSON ORCHARD SERVICE
A Complete Line of Orchard Tools
Equipment and Chemicals
FLORA DALE . . PA.

IRRIGATED SOILS
Their Fertility and Management
By D. W. Thorpe & H. S. Petersen

An excellent reference book for fruit growers who irrigate or plan to do so. 288 pages. 74 illustrations.

Sent postpaid on receipt of \$5.00

AMERICAN FRUIT GROWER
Willooughby, Ohio

—FREE!— Green Manures Chart & Book

Tell How to Do Wonders

WOULD you like to increase greatly the fertility of certain areas of your soil? Here's how you can—easily, at low cost! From early Spring to late Fall, sow one green manure crop after another and work them into the soil when they are young, green and rich in protein and chlorophyll.

Rye, buckwheat, various clovers, vetches, soy beans, sunflower, millets, barley, oats, Sudan grass, sorghums, etc., etc. can be used. You'll be amazed at the tremendously increased fertility of your soil—how much easier it is to work, and how much more moisture it holds, how it's protected from erosion, how it yields better crops! It's better than composting or buying manure—and only a fraction of the cost and work!

Which ones to sow? For sweet and sour, heavy and light soils? For different sections of country and time of year? When to sow—how deep? How much seed? Whether or not to use lime and fertilizers? When to work into the soil? How to do it easily? All these and many other questions are answered in the big, easy-to-follow FREE CHART we have had prepared for our friends and customers by Dr. T. H. Everett of the N. Y. Botanical Gardens. Also included FREE is a 68-page illustrated book that gives everything you'll want to know about 50 different crops you can grow for green manure and soil improvement.

Right now is the ideal time of year to do wonders for your soil. Just send name and address for FREE CHART and BOOK. No obligation whatever.

ROTOTILLER, Inc.
Dept. 459, TROY, N. Y.

Makers of the World-Famous Rototiller®

*Trademark Registered

How to Make a Living in the Country

By FRED TYLER

Ninety-six pages of ideas for making a living in the country. The eight pages on roadside marketing are worth the price of the book.

Sent postpaid on receipt of \$1.00

AMERICAN FRUIT GROWER
WILLOUGHBY, OHIO

The
New

Scythette POWER SCYTHE



a twist of the wrist
and the
SCYTHETTE becomes the

Sawette

America's most revolutionary
chain saw cuts trees, or any
growth up to 6" in diameter.
Even the tallest while operator
is in upright position. Speedy,
efficient, rugged, the
Sawette is the answer
to heavy growth
clearing problems.

CUTS WEEDS, GRASS, REEDS

4 TIMES FASTER THAN
ORDINARY METHODS

NEW POWER - NEW ENGINEERING

Now equipped with double
power, double fuel capacity.

Trims weeds on rocky or uneven
ground. Cuts grass or weeds close to
buildings. Clips off reeds or underwater
growth. Cuts with ease wherever a
man can walk, wade, or row a boat.

Equipped with new two h.p. motor,
one quart capacity gas tank, 20"
oscillating cutter bar. Weighs
only 26 pounds.



WRITE FOR FREE LITERATURE

Hoffco, Inc.

RICHMOND, INDIANA

Advertisement



From where I sit ... by Joe Marsh

An "Impressive Collection"

Dutch Miller, from Cookstown
up in the hills, was in town yes-
terday to collect his "library." He's
teacher up there—in a one-room
schoolhouse.

Several weeks ago Dutch wrote
asking if I could possibly lay my
hands on some books so his school
could start a library.

Well, just about everybody
pitched in. Slats Foster painted a
sign, "Books for Cookstown"—and
put it on Sandy Johnson's truck.
Then Sandy drove all over collect-
ing. We wound up with 453 books
—textbooks, workbooks, and plain
good reading matter.

From where I sit, this was a fine
demonstration of how people with
different abilities can work to-
gether. It's too bad, though, there
are still some among us who don't
respect the other's right to have
preferences for, say, political can-
didates or a choice of beverages.
You may be a Democrat and like
buttermilk, I may be a Republican
and prefer a glass of beer—but in
my "book," tolerance of these dif-
ferences is what makes America
great!

Joe Marsh

Copyright, 1952, United States Brewers Foundation

FOR YOU

Roadside Profits

People are re-
porting extra
profits by canning
some of their
fruit for roadside
sales. Ball can-
ning and freezing
equipment, easy
to use and inex-
pensive, is a pop-
ular favorite. The
Ball jars with the
new Ball dome
lids are easy to
use and provide
positive protection
for your fruits and
vegetables. Why not write Ball Brothers,
Muncie, Ind., for descriptive literature?



Field Basket



The other day we saw a grower har-
vesting Duchess apples with Washburn
rubber-coated farm baskets. He told us
each basket holds three-fourths bushel
and is easy to handle. Since he has used
them his pickers work more quickly. It
was interesting to note that these baskets
have been in use in his orchard for more
than four years and their cost is relatively
small. If you want full particulars, write
the Washburn Company either at Wor-
cester, Mass., or Rockford, Ill.

Don't Take a Chance

Every year we
hear of a grower
falling from a lad-
der and injuring
himself seriously.
This need not
happen to you if
your ladders are
equipped with the
new Hydra-Lizer.
The Hydra-Lizer
assembly consists
of two steel legs which act as plungers.
At the end of each leg is a shoe with four

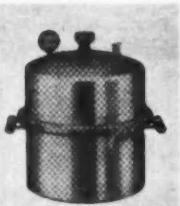


- CANNING EQUIPMENT
- FERTILIZER SPREADER

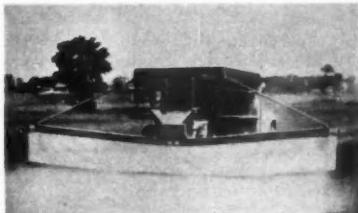
sharp teeth which dig into the surface of the ground. The assembly is filled with oil above the plungers. Opening the central valve permits oil to move from one side of the system to the other. This allows the legs to adjust automatically. For full details write Mine Safety Appliances, Braddock, Thomas, and Meade Sts., Pittsburgh 8, Pa.

Canning Equipment

To process fruit and vegetables, proper canning equipment must be used. The Burpee canner is efficient, inexpensive, and the unit is available in two sizes. Absolute safety is guaranteed by the Burpee safety-seal clamping band. It prevents accidents due to carelessness by automatically allowing high, excess pressure to escape from the canner slowly and safely. If your canner becomes defective after years of use, Burpee will overhaul it and replace worn parts for only \$2 plus postage. Write Burpee Can Sealer Company, Barrington, Ill., for full details.



Fertilize at Less Cost



Growers are enthusiastic about the new Hercules fertilizer and lime spreader. This machine distributes moist or dry fertilizer evenly and thus guards against soil burn and spotty concentration of materials. Chain conveyors are utilized to pull the fertilizer across a diagonally cut distributor so that the material drops uniformly at all times.

Lime or fertilizer can be spread in 20-foot swaths from low discharge arms which will pass easily under branches. The Hercules spreader can be set to distribute any quantity of material from 200 pounds to 8,000 pounds per acre. If you want a spreader at a reasonable price, write Hercules Steel Products Corporation, Galion, Ohio.

SEPTEMBER, 1952

Make Fresh Apple Juice with New Processing Method...

LOW COST,
GUARANTEED

SWEDEN
SPEED JUICER



◀ EARN BIG PROFITS FROM ROADSIDE SALES with a SWEDEN SPEED JUICER. Makes delicious juice from all sizes or off-grade fruit. Produces 4 gallons per-hour—1 glass in a few seconds! A SWEDEN juicer many other fresh fruits and vegetables: carrots, celery, cucumbers, etc., with up to 60% more vitamins and minerals! Let a SWEDEN Speed Juicer help you sell more apples, gain new profits on juices. Sell Sweden Juicers for big unit profits! Write for details.

SWEDEN FREEZER SALES CORP. (Juicer Division)
Dept. JF-1, Seattle 99, Washington

SWEDEN'S BEST FOR EVERY JUICING USE

- Fast, Simple Efficient—no peeling or coring
- Attractive, Easy to Clean
- Durable Construction—Fully Guaranteed
- Conforms with Federal Food Drug, and Cosmetic Act
- UL and CSA Approved
- Long life, Heavy-duty ½HP G. E. Motor

Be Sure With GREENING'S TREES

- BUD SELECTION
- ALL ORDERS GUARANTEED
- PROVED and PROFITABLE VARIETIES

The Greening Nursery Company, one of the leaders in bud selection, have for over 100 years given all growers the benefits of their research and improved strains which mean greater orchard profits.

AGENTS

Earn extra money, full or part time. It's pleasant and profitable to sell Greening nursery stock. Write us today for all of the details.



Send 10c to cover postage for the Greening 100-year anniversary 80-page color catalog.



THE GREENING NURSERY CO.
P. O. BOX 605 MONROE, MICHIGAN

Are You A Nursery Salesman?

Add to your income by selling AMERICAN FRUIT GROWER. It's a logical combination for AMERICAN FRUIT GROWER will help your customers get the best results from the nursery stock you sell them. Make every call pay! This means additional cash for you regardless of whether you sell a nursery-stock order or a subscription to AMERICAN FRUIT GROWER.

Write today for our liberal, nursery agents' plan. Address:

GILBERT MEISTER, Circulation Manager
AMERICAN FRUIT GROWER
Willoughby, Ohio

You Can Save Up to 40% on SPRAYING*

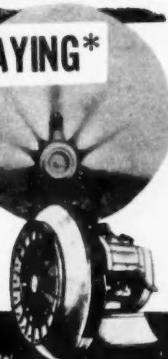
CARDOX AQUA-JET BLOWER

Gives super-performance to any high pressure sprayer. Tractor seat control enables one man to do the job faster, with less use of spray material. 6 impinging twin jets AND Blower project atomized spray 20 to 40 feet in adjustable patterns. Specially designed for use with concentrates and semi-concentrates. See your Aqua-Jet dealer or write us.

- One Man Operation
- Attaches to Any High Pressure Sprayer

*Actual user reports

HURST INDUSTRIES, INC. SAN JOSE, CALIF.
A Division of Cardox Corporation
Eastern Distributor NEWTON CHEMICAL & SUPPLY CO., Bridgeville, Del.



The Orchard Home

APPLE PAN DOWDY by the end of 1952 promises to be a familiar term and, what is more important, a familiar dish in homes and restaurants throughout the U. S. What is Apple Pan Dowdy? It is an old English dessert consisting of plenty of apples. You will find the recipe for this luscious dish below.

To the Woman's Auxiliary of the Horticultural Association of Pennsylvania goes credit for the plan to stimulate the interest of young ladies in the junior and senior high school age group in the culinary arts and at the same time push apples through the medium of a table dessert. In the Apple Pan Dowdy contest which the auxiliary was instrumental in arranging last year—the first in Pennsylvania as well as the first in the U. S.—1,500 F.H.A. (Future Homemakers of America) baked thousands of dishes of Apple Pan Dowdy. The contest concluded with the selection of a queen, 18-year-old Vivian Drayer, senior from Saegerstown High School in Crawford County, who is pictured here in her queenly costume.

In appreciation of her excellent promotion of King Apple during the contest and while on tour during National Apple Week with state apple queens from the Appalachian area, friends of agriculture in the Keystone state, through the Pennsylvania Chain Store Council, have awarded Miss Drayer a four-year scholarship at Pennsylvania State College in Home Economics.

The exceptional results of the Pennsylvania Apple Pan Dowdy contest have become the basis for an eastern states (N. Y., N. J., Pa., Md., Va., and W. Va.) contest in 1952, sponsored by Appalachian Apple Service, Inc., Martinsburg, W. Va. The 1952 contest will culminate in the crowning of an eastern states Apple Pan Dowdy Queen in Washington, D.C., on October 31.

Here is a great opportunity for prospective queens to pay homage to King Apple, and a really excellent way of promoting the King in every section of the U. S.



SEPTEMBER, 1952



George Wayman

Here are additional fruit recipes to tempt the family:

APPLE PAN DOWDY

1 quart pared and sliced apples
1 cup brown sugar
 $\frac{1}{4}$ cup flour
 $\frac{1}{4}$ teaspoon salt
 $\frac{1}{2}$ tablespoon vinegar
1 cup water
1 teaspoon vanilla
1 tablespoon butter or margarine

Place apple slices in a well-greased, heat-resisting glass dish. Mix sugar, flour, and salt in a one-quart saucepan. Add vinegar and water, stir well. Cook over low direct heat until thick, stirring constantly. Remove from heat; cool. Add flavoring and butter. Pour this syrup over apple slices.

TOPPING

1 cup flour
 $\frac{1}{2}$ teaspoon salt
2 teaspoons baking powder
 $\frac{1}{2}$ tablespoons shortening
 $\frac{3}{4}$ cup milk

Sift flour, salt, and baking powder together twice. With a pastry blender or two knives cut in the shortening until lumps are the size of peas. Add milk and stir until mixture is wet. Drop by spoonfuls or pour on apple mixture. Bake in a 400° oven about 40 minutes. Serve plain or with top milk or cream.

It is best to use unsweetened apples if they are canned.

PEAR JAM

2½ pounds pears (6 or 7)
1 orange
1 lemon
 $\frac{1}{4}$ cup crushed canned pineapple
5½ cups sugar

Peel and core pears. Grind pears, orange, and lemon (including peel), using coarse blade of food chopper. Add pineapple and sugar and stir well. Heat to boiling. Cook 20 minutes, stirring occasionally. Pour into hot sterilized glasses. Seal. Makes eight, 6-ounce glasses.—Miss Frances Christopher, Fort Worth, Tex.

PEACH MARMALADE

4 peaches
2 oranges
1 small bottle maraschino cherries

Wash peaches, remove skins, and cut in small pieces. Wash oranges, remove seeds, and pour juice over peaches. Put remainder of oranges through food chopper. Cut cherries up fine. Add 1 cup of sugar to 1 cup of fruit. Boil 1 hour or until desired thickness.—Mrs. Howard Stephenson, Gordonsville, N. B., Canada.

CANNING NOTE

My mother used to say: "Fruit that comes out of the can will be no better than the fruit that went in—it pays to can the best!"—Miss Lettie B. Ritchie, Weyauwega, Wis.

BACK TO SCHOOL IN FINE FASHION

The basic dress in a planned school wardrobe should have simple lines so it can go through the school term looking new with each wearing. Shown here: The flattering basic dress with fitted bodice and full-flared skirt. Three-quarter sleeves are cut in one with the bodice, and the collarless neckline can be left bare to be sparked with jewelry or can be decorated like the

skirt with braid trim. Slit pockets are revealed in the side seams. Make it in flannel to go through the winter, or in a novelty cotton tweed to be worn all year round. Size 15 requires 3 yards of 54-inch fabric without nap; 7½ yards of novelty trimming.

Advance Pattern 6168. Sizes 11 to 17. Price 35 cents.

Send order and cash for patterns to Pattern Department, American Fruit Grower, Willoughby, Ohio. Be sure to specify size. Print name and address clearly.

• Fruit for Health •

Fruit Maturity Comes Next

ANY doubt that Mrs. Housewife is being offered constantly improved products is quickly dispelled by a look at the produce department in any retail food store. The displays are nicely arranged, the variety is great, and the general condition is good. Insects and diseases find no home there. Everything looks shipshape, sanitary, and attractive.

But one factor still needs attention, and that is general quality and maturity. And this applies in most lines. In fact, one needs only to try a honeydew melon or a shapely cantaloupe to realize how deceitful appearance can be. Too many melons are still hard as rocks and able to stand up many more days when Mr. Husband bends a spoon at the breakfast table as he tries to cut his way into the unyielding culprit.

The grower, when he grew and then harvested those fine melons, never dreamed that they would have

such an untimely end and that Mrs. Housewife would say, "never again" to his product. Unless he finds some way to educate the retailer or the user to ripen melons properly before serving, he soon will be out of business.

This same situation applies in too many other lines. Growers of winter pears have learned the importance of special ripening rooms; and the banana industry, too, has made it pay. But there is still too much fruit that does not reach the consumer in prime condition. One of the troubles is too early picking; another trouble is too late picking.

Happily, the fruit industry is beginning to see the light, and movements are under way in several states to enforce regulations that will permit the sale of only properly mature fruit. It is another step in the right direction brought on perhaps by the fierce competition between fruits, but right just the same.

150 Years of Du Pont

THIS month marks the 150th anniversary of the founding of E. I. du Pont de Nemours & Co., Inc. America was young in 1802 when E. I. du Pont founded a small enterprise in Delaware which was destined to become an important cog in the great industrial might of America. From a small powder mill to the building and operating of the first atomic energy plant is the spectacular story of the rise of the Du Pont Co.

Recognized today among big business as one of the best managed companies in the United States and the leader among all American enterprises in research, Du Pont is daily bringing into reality its simple slogan: "Better things for better living through chemistry."

Research, experimentation, and investigation were common activities of early American industries and contributed much to the rapid growth of early America. Up to 1927, however, fundamental research dealing with the secrets of matter had not been undertaken except in an academic way. It was in that year that Du Pont became the first American industrial company to inaugurate a program of basic science. This program was soon

developed into spheres of organic research and developments of far-reaching importance.

In agriculture, as in industry, Du Pont has served America. Du Pont fertilizers and spray chemicals are an important factor in producing bountiful crops. AMERICAN FRUIT GROWER salutes Du Pont on its 150th anniversary.

Fruit Production at a Glance

	Average 1941-50	1951	USDA Aug. 1, Est. 1952
Thousand Bushels			
Apples	110,379	110,660	96,122
Eastern	46,502	52,788	42,448
Central	19,301	24,342	16,553
Western	44,576	33,530	39,121
Peaches	68,186	63,627	61,347
Cling, Calif.	19,506	24,544	18,126
Free, Calif.	11,193	11,334	10,918
Pears	30,306	30,028	29,902
Tons			
Apricots	228,740	183,200	172,900
Cherries	191,417	230,030	201,760
Sweet	92,434	71,790	95,938
Sour	98,983	156,240	105,850
Plums	79,000	97,000	63,700
Prunes, (dry) Calif.	183,700	177,000	137,000
Grapes	2,807,710	3,385,800	2,942,900

Fruit Talk

Roger W. Babson is interested in "deflecting gravity waves by an alloy of metals," which will reduce the weight of a load of fruit from 30,000 to 5,000 pounds and put fruits and vegetables on distant markets at low cost.

The National Grape Co-operative Association, Inc., has entered into an agreement with the Welch Grape Juice Company, whereby for the 1951 grape crop and for the next five years the Welch company waives all of the profits which it would be entitled to retain under the present agreement, these profits to be applied toward the purchase of the Welch business for the grower organization.

F. L. Granger of Benton Harbor, Mich., has applied for a patent on the recovery of chlorophyll from green cannery wastes which carry as much as one to five pounds of chlorophyll (valued at \$90 a pound) per ton of waste, now in much demand by pharmaceutical houses.

Speaking of competition, there are as many as 125 different fruits and vegetables marketed annually in relatively large volume in the U. S. The modern fully stocked produce department will carry 40 to 60 fresh fruit and vegetable items.

Useful slogans: "You can't always figure customers. I don't try to understand them. I just aim to please them." And, "If you want a lot of customers in the aisles you had better have a lot of different items on display."

Barton of Ohio State University reports that the color and firmness of sliced Premier strawberries can be improved by adding firming agents and giving a vacuum treatment.

That horticultural varieties were complex was anyone's guess but just how complex was not fully appreciated until the cytologist looked into the matter. Sports of the McIntosh variety have now been found with 1) a single layer (epidermis) of cells with diploid number of chromosomes and all the rest of the fruit tetraploid; 2) both epidermal and sub-epidermal layers diploid and the rest tetraploid; and 3) three layers of diploid cells covering tetraploid interior.

The valuable series of foreign market notes by F. A. Motz, fruit marketing specialist abroad, contain such interesting additional items as: "The rehabilitation of western Germany is proceeding at an almost incredible rate. Life in rural Germany is much as it was before the war and in some instances better. The German people are eating well."

The Malling dwarfing rootstocks are said to be revolutionizing fruit growing in Holland. The change is "from orchard to fruit garden" in which trees are grown in a hedge system with permanent and filler trees.

—H.B.T.

Coming Next Month

- Behold! The Lychee
- New Fruits Worthy of Trial
- Try Planting 100 Dwarf Fruit Trees
- Plant to Beautify Your Orchard Home and Market
- A Check List for Mouse and Rabbit Control

Your IH Dealer invites you to PROVE TO YOURSELF . . .

McCormick FARMALL® Super C pull-power



See how easily you can plow up to 8 inches deep at 4 mph with the Farmall Super C and McCormick direct-connected plow with two 14-inch bottoms. Ideal power-weight balance assures full traction . . . you can

feel the pull-power that takes you steadily down the field. Notice the comfortable ride, the super-easy steering, and the positive action of the double-disc brakes. You'll appreciate Super C pull-power on *any* job!



Prove you can double-disk up to 28 acres a day with the Super C and McCormick 6 or 7-foot tandem disk harrow. Ask your IH dealer to let you try the Super C.



Prove you can save up to 25% on fuel. Try the Super C with hydraulic Touch-Control and notice how much more work you do on less fuel.

Make a date NOW for your FREE FIELD TEST. See your IH dealer. Prove to yourself that the Super C is first in its class for pull-power, in

fuel economy, in easy handling, for ALL your 2-plow 2-row work. You can buy on the Income Purchase Plan and let the Super C pay for itself in use.

See you at the polls!



INTERNATIONAL HARVESTER

International Harvester products pay for themselves in use—McCormick Farm Equipment and Farmall Tractors . . . Motor Trucks . . . Crawler Tractors and Power Units . . . Refrigerators and Freezers—General Office, Chicago 1, Illinois

"Only 3½¢ a mile

**covers running costs for
my Ford F-6"**

WASHINGTON
Report No. 11393



**says W. M. Kohagen, General Mgr.,
Yakima County Horticultural Union,
Yakima, Washington**

Mr. Kohagen uses his fleet of nine Ford Trucks to rush fresh cherries from the orchard to the warehouse or cannery. He says: "The Ford engine has very good pulling power to move heavy loads out of tight places. We find we can make six more trips per day. Most of our loads are 6-ton net and our economy has been very pleasing." During the Economy Run, Mr. Kohagen's F-6 traveled 6,373 miles and running costs for gas, oil and maintenance were only \$213.49... a thrifty 3½ cents a mile!

This F-6 chassis mounting a fruit rack body is but one of many models available. There's a Ford Truck tailor-made for your work from half-ton Pickups to 155-h.p. BIG JOBS.



This new Ford 101-h.p. Cost Clipper Six is one of the best proved truck engines ever introduced. It had 50,000 dynamometer test-hours and over 500,000 vehicle test-miles.

Now! Up to 14% more Gas Savings and more Speed Hauling power, too!

**New LOW-FRICTION design in 3 new Ford Truck
high-compression engines cuts friction loss!**

Ford's LOW-FRICTION design cuts friction power-loss up to 30%! A new Short-Stroke principle reduces piston travel up to 20%—makes for longer engine life. New OVERHEAD-VALVES give more efficient fuel-feeding. New HIGH-COMPRESSION gives extra power on regular grade gasoline.

You can get new LOW-FRICTION design in 3 of the 5 great Ford Truck engines for '52. And you get more power than ever in the famous 239-cu. in. truck V-8 or the 254-cu. in. BIG SIX. See what's new at your Ford Dealer's!

Availability of equipment, accessories and trim as illustrated, is dependent on material supply conditions.

DON'T GUESS! See how little it can cost to run a truck in your kind of work. See the cost figures in this 144-page book showing results from the 50-million-mile Ford Truck Economy Run. See it at your Ford Dealer's now!

FORD TRUCKING COSTS LESS

and FORD TRUCKS LAST LONGER!

Using latest registration data on 8,069,000 trucks, life insurance experts prove Ford Trucks last longer



- FREE MAIL THIS COUPON NOW! -

Ford Division of FORD MOTOR COMPANY
3298 Schaefer Rd., Dearborn, Mich.

Please send me, without charge or obligation, complete details on the new Ford Trucks for '52 and the five great Ford Truck engines!

FULL LINE HEAVY-DUTY MODELS
LIGHT MODELS EXTRA HEAVY-DUTY MODELS

Name _____ (PLEASE PRINT PLAINLY)

Address _____

City _____ State _____

Check here if student